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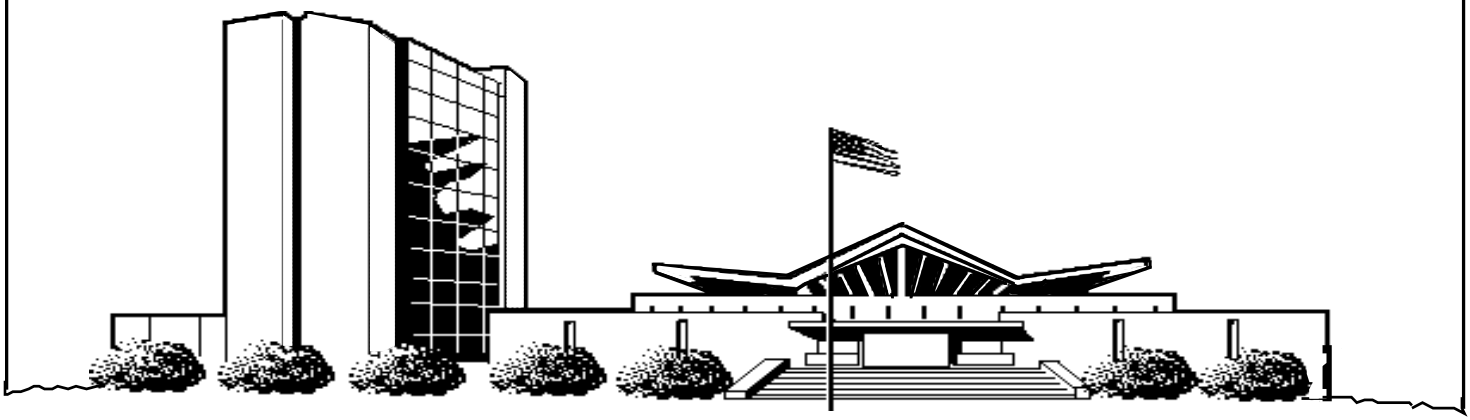
This issue of the *Technical Bulletin* contains information about new features that will be introduced in the 1996 system. The Library has added several new features to make the retrieval of data from the databases in 1996 easier and more efficient. Up to 25 authors may now be included in citation records and abstracts will no longer be truncated based on the length of the article. New Publication Types (PT) data have been added (page xx).

Many MeSH chemical headings have undergone a major change. Beginning with the 1996 system, you will be able to retrieve articles on chemicals and their functions (pharmacological actions) in a more consistent, precise fashion by coordinating chemicals with their specific pharmacological actions. Please read the article beginning on p. xx.

SPACELINE, a new database, developed through the collaborative efforts of the National Aeronautics and Space Administration (NASA) and the National Library of Medicine is now available (page xx). There is a separate article on topics related to Year-End Processing (page xx). Update Schedules for many of the databases are listed in Appendices A-C.

Searchers are urged to read the issue carefully and then try the new capabilities in their searches after the new system becomes available online on December 11, 1995.

Lois Ann Colaianni



U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES • Public Health Service • National Institutes of Health
National Library of Medicine

NLM TECHNICAL BULLETIN

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The NLM Technical Bulletin is an administrative document sent to formal members of NLM's MEDLARS Online Network.

ELHILL® COMPUTER

MEDLARS® DATABASE	TOTAL RECORDS	DATES COVERED	DATE UPDATED	UPDATE TAG
AIDSDRUGS	230		07 OCT 95	9511(EM)
AIDSLINE®*	120,949	JAN 80-DEC 95	21 OCT 95	9512(EM)
AIDSTRIALS	682		04 NOV 95	9512(EM)
AVLINE®	29,317	THRU NOV 95	03 NOV 95	
BIOETHICSLINE®	47,049	JAN 73-OCT 95	15 SEP 95	9510(EM)
BIOTECHSEEK	Removed from MEDLARS		03 JUL 95	
CANCERLIT®	1,162,909	JAN 63-NOV 95	04 NOV 95	9511(EM)
CATLINE®	757,089	THRU NOV 95	03 NOV 95	
CHEMID	267,994		06 FEB 93	
CHEMLINE®	1,409,723		23 SEP 95	9508(EM)
DENTALPROJ™	896		27 JUL 95	
DIRLINE®	17,947		30 SEP 95	
DOCUSER®	14,381		04 NOV 95	
HEALTH	851,588	JAN 75-OCT 95	28 OCT 95	9512(EM)
HISTLINE®	154,927	JAN 70-NOV 95	04 NOV 95	9511(EM)
HSRPROJ	2,413		26 SEP 95	9506(EM)
HSTAR**	1,448,461	1985-DEC 95	08 NOV 95	9512(EM)
MEDLINE®***	1,346,770	JAN 92-DEC 95	21 OCT 95	9512(EM)
MED90	748,681	JAN 90-DEC 91	02 AUG 95	
MED85	1,688,452	JAN 85-DEC 89	24 JUN 95	
MED80	1,388,882	JAN 80-DEC 84	15 APR 95	
MED75	1,278,996	JAN 75-DEC 79	08 JUL 95	
MED66	1,986,347	JAN 66-DEC 74	03 JUN 95	
MESH VOCABULARY FILE®	103,547	1995	21 OCT 95	
NAME AUTHORITY FILE®	Removed from MEDLARS		08 APR 95	
PDQ®		THRU DEC 95	01 NOV 95	
POPLINE®	226,965	1970-NOV 95	04 NOV 95	9511(EM)
SDILINE®	32,823	DEC 95	21 OCT 95	9512(EM)
SERLINE®	85,562	THRU OCT 95		
SPACELINE	94,461	THRU OCT 95	28 OCT 95	9510(EM)
TOXLINE®	1,450,964	1981-1995	14 OCT 95	9510(EM)
TOXLINE65	692,918	PRE 1965-1980	25 AUG 95	
TOXLIT®	1,465,250	1981-1995	14 OCT 95	9510(EM)
TOXLIT65	586,405	1965-1980	01 SEP 87	

* AIDSLINE: PART 4 OF 5 FOR 9512 (EM) WEEKLY UPDATE
** HSTAR: PART 4 OF 5 FOR 9512 (EM) WEEKLY UPDATE
*** MEDLINE: PART 4 OF 4 FOR 9512 (EM) WEEKLY UPDATE

TOXNET® COMPUTER

CCRIS	6,806		02 OCT 95	
DART™	26,009		16 OCT 95	
EMIC	11,645		02 OCT 95	
EMICBACK	75,886		04 APR 94	
ETICBACK	49,591		04 APR 94	
GENE-TOX	2,987		17 AUG 95	
HSDB®	4,505		23 OCT 95	
IRIS	666		05 SEP 95	
RTECS®	130,203		01 SEP 95	
TRI87	80,404		01 AUG 95	
TRI88	87,638		01 AUG 95	
TRI89	87,500		31 JUL 95	
TRI90	86,995		31 JUL 95	
TRI91	85,135		01 AUG 95	
TRI92	82,684		31 JUL 95	
TRI93	80,379		31 JUL 95	
TRIFACTS	326		10 APR 92	

Technical Notes

New Clinical Alert Available

Two clinical alerts were issued during September and October 1995. On September 21, 1995 the National Heart, Lung, and Blood Institute (NHLBI) issued "Bypass Over Angioplasty for Patients with Diabetes" and on October 13, 1995, the National Eye Institute (NEI) issued findings from the Endophthalmitis Vitrectomy Study (EVS). The texts are available to MEDLARS users from the ALERT file (formerly the INFORM file). The online ALERT file also contains the thirteen previously issued National Institutes of Health Clinical Alerts/ Advisories.

NLM began offering Clinical Alert notices online in January 1991. As noted in previous issues of the *Technical Bulletin* (November-December, 1994, page 3; January-February 1992, pages 17-26; and January-February 1991, page 21) National Institutes of Health (NIH) Clinical Alerts were begun to expedite the release of findings from clinical trials funded by the NIH when such release might significantly affect morbidity and mortality.

To retrieve the new Alert online, type **file alert** at the first USER: prompt to enter the file. Then, at the next USER: prompt, type:

alert (tf)

prt 2 dl for the full text of the alerts

OR

alert (tf)

prt 2 for just a brief entry (unique identifier, date of entry, title, and source)

The full text of National Institutes of Health Clinical Alerts are also mailed to all libraries that are members of the National Network of Libraries of Medicine (800-338-7657) and made available on the NLM Gopher and the NLM anonymous ftp server. To obtain these clinical alerts from the NLM Gopher, gopher to **gopher.nlm.nih.gov**, select the **National Institutes of Health (NIH) Clinical Alerts**, the alerts are listed by title. They are also available in electronic form via anonymous ftp from the host **nlmpubs.nlm.nih.gov**, in the directory **alerts**, as **diabetic.txt** and **ophthal.txt.**

Coming Attraction: Combined HEALTH and HSTAR Database

The HEALTH (Health Planning and Administration) and HSTAR (Health Services Technology Assessment and Research) files will be reorganized into a new database called HealthSTAR in early 1996. The new database is a collaborative effort of the NLM, the American Hospital Association (AHA) and the National Information Center on Health Services Research (NICHSR). It will contain citations derived from MEDLINE and CATLINE, as well as unique citations on healthcare planning and administration prepared by AHA and technology assessment prepared under the guidance of the National Information Center on Health Services Research (NICHSR). The structure of the new database will be similar to the existing HSTAR. Watch for announcements in the online news and in the *Technical Bulletin* for the exact date of availability of the combined file.

TOXLINE Regeneration

TOXLINE and TOXLINE65 were rebuilt in August to provide 1995 MeSH indexing on the records in the TOXBIB and BIOSIS subfiles. Due to problems encountered in processing the DART subfile, DART was not included in the rebuilt file until early September 1995. The rebuilt file includes an entire replacement of the International Pharmaceutical Association (IPA) subfile. Some additional indexing points are now provided for IPA records, such as a Classification Code (CC) field which contains the IPA section heading number and the related section number (if present) separated by a slash. Also during the rebuilding/regeneration of TOXLINE, the TSCATS subfile was replaced; a new year of CRISP data, FY1994, was included (CRISP now covers FY1992-94); and a new FEDRIP subfile was included. Following the regeneration. TOXLINE contained 1,401,053 records and TOXLINE65 contained 692,918 records.

The replaced subfiles have an Entry Month (EM) value of 9507 or 9508. Searching 9507 (EM) or 9508 (EM) will get all the new DART, FEDRIP, CRISP, IPA (in the revised format) and TSCATS records. Most of these records are not new, but do contain updated indexing or other new data in the records. The new CRISP records can most easily be retrieved by searching **(si) crisp and 94 (yr)** in the search strategy. Searchers who are doing their own SDI-type searches should use this search method for monthly updates following the regeneration, the first of which occurred in September. The first update following the regeneration included data intended for TOXLINE updates in June, July, August, and September. Use of the EM value retrospectively is not recommended.

Meeting Abstracts Added to AIDSLINE

On Thursday, October 19, 1995, abstracts from the following four conferences were added to AIDSLINE. They all have the alphabetic mnemonic AIDS followed by a slash and the Unique Identifier (UI) value in the Secondary Source ID (SI) field.

1. The Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC), Orlando 1994. There were 352 abstracts indexed and added to the file. The Title Abbreviation (TA) is Program Abstr Intersci Conf Antimicrob Agents Chemother.

2. The First National Conference on Human Retroviruses and Related Infections, December 12-16, 1995. There were 748 abstracts indexed and added to the file. The Title Abbreviation (TA) is Natl Conf Hum Retroviruses Relat Infect (1st).

3. The Second National Conference on Human Retroviruses and Related Infections, January 29-February 2, 1995. There were 645 abstracts indexed and added to the file. The Title Abbreviation (TA) is Natl Conf Hum Retroviruses Relat Infect (2nd).

4. The HIV Infection in Women: Setting a New Agenda meeting, Washington, D.C., February 22-24, 1995. There were 428 abstracts indexed and added to the file. The Title Abbreviation is HIV Infect Women.

Effective this year all new conference/ meeting records, as well as newsletter records, will have an SI value of AIDS to cut down on the number of SI subset values in the AIDSLINE file. This will make it more than a one-step process to isolate all abstracts from a particular conference, meeting or newsletter. Users are advised to search for these sources by TA and DP rather than by AIDS (SI) because the latter now represents many different sources of data.

Database Update Schedules and Database Update Frequency Chart for 1996

The NLM database update schedules and update frequency chart for 1996 are published as Appendixes A, B and C. We suggest that these pages be saved for future reference during the 1996 year.

Closing Date for Submission of New or Changed 1997 MeSH Headings

The MeSH Section of the NLM considers all suggestions for Medical Subject Heading (MeSH) additions and changes annually. Users are encouraged to send suggestions and comments to the NLM MeSH Heading Suggestion e-mail address (**meshsugg@nlm.nih.gov**) or to use the form for Medical Subject Heading suggestions (Appendix D of the January-February 1995 *Technical Bulletin)*. The closing date for suggested new or changed terms or Pre-Explosions for the **1997** vocabulary is February 19, 1996. This allows sufficient time for NLM staff to finalize the terminology and for the printing cycle so that the publications are available in the early Fall. Indexing with the new vocabulary starts in late October and early November for the next January's Entry Month data.

Viewing TOXNET News Bulletins

TOXNET News Bulletins are brief summaries of selected TOXNET NEWS messages, including file updates, that are the opening screen display for users who logon to TOXNET directly. These Bulletins are not displayed automatically to other groups of users, such as those accessing TOXNET via the ELHILL gateway or Grateful Med. However, any user can now view or re-view the TOXNET News Bulletins by typing either NEWS or NOTES at any TOXNET USER: prompt and then selecting item "0".

MeSH MARC Data Available via FTP

The National Library of Medicine is pleased to announce the availability of its MeSH vocabulary in MARC-compatible format via ftp. The data have been available on magnetic tape for many years for an annual fee of $1,000.00. This spring the data also became available to licensees via ftp. There is no fee to lease the data received via ftp.

Interested parties may ftp a sample of MeSH vocabulary in MARC-compatible format from **nlmpubs.nlm.nih.gov** in the directory **/nlminfo/agreements/ leased/mesh**. Please read the readme.txt file first. Then, ftp the two files for the sample data in addition to either the file containing the PostScript or Word Perfect version of the Conversion Specifications. A license is still required if the full file is desired.

As mentioned on page 3 of the May-June 1995 *Technical Bulletin*, information about leasing NLM data is available electronically from NLM's anonymous ftp and gopher servers. Users may ftp to the **nlminfo/agreements/leased/license** directory or gopher to the following: **NLM Fact Sheets, Newsletters, Reports, Agreements and Forms**, then **NLM Agreements and Forms**, then **Leasing Data from NLM**. Contact Jane Rosov, MEDLARS Management Section, (Fax: 301-496-0822) with any questions.

Modem Help Fact Sheet Available via FTP

A modem help file (**modem.txt**) for Grateful Med is now available from NLM's anonymous ftp server—gmedserv.nlm.nih.gov. The fact sheet is in the following directories:
/grateful/pc/setup_guidelines
/grateful/mac/setup_guidelines

Bioethics Thesaurus Available

The annual edition of the *Bioethics Thesaurus* provides the latest version of the controlled subject vocabulary, or Keywords, used for indexing and searching the BIOETHICSLINE database. BIOETHICSLINE is the corresponding NLM database of bibliographic references concerned with ethical and ethically-related public policy issues in health care and biomedical research. It is produced by the Bioethics Information Retrieval Project at the Kennedy Institute of Ethics, Georgetown University, and is made available through NLM's MEDLARS. Information about formulating BIOETHICSLINE search strategies, or about obtaining copies of

difficult-to-locate publications cited in the database, may be obtained from the Bioethics Information Retrieval Project at the addresses and telephone numbers below.

The 1995 *Bioethics Thesaurus* is also now available electronically from NLM in both WordPerfect 5.1 and ASCII formats from the following World-Wide Web URLs:

WP51: **ftp://nlmpubs.nlm.nih.gov/online/medlars/manuals/biothes.wp**
ASCII: **ftp://nlmpubs.nlm.nih.gov/online/medlars/manuals/biothes.txt**

The 1995 print edition of the *Bioethics Thesaurus* was published by the Kennedy Institute of Ethics with funds provided under contract with the National Library of Medicine. Included in the *Thesaurus* are annotations for most of the Keywords with explanatory scope notes and cross references to broader, narrower, and related terms. Also included are new Keywords (KW) for 1995, a permuted index, a selected list of 'major issues' Keywords, a full list of Subject Captions (SC), a sample BIOETHICSLINE Record, and approaches to devising a Keyword (KW) search strategy. Copies of the printed *Thesaurus* are available for $20.00 ($25.00 outside North America) from:

Bioethics Information Retrieval Project
Kennedy Institute of Ethics
Georgetown University
Washington, DC 20057-1065
Tel: 202-687-6738 or 800-MED-ETHX
Fax 202-887-6770
e-mail:
medethx@guvm.ccf.georgetown.edu

All orders must be prepaid. Checks should be made payable to the Kennedy Institute of Ethics. Charges to Master Card or Visa are also accepted.

Online Codes Map

A new Online Codes map showing distribution of code holders within the United States is provided as Appendix D of this issue of the *Technical Bulletin*.

Correction to July-August 1995 Technical Note

The Entry Month (EM) in the first sentence of the July-August Technical Note entitled "AIDSLINE Additions" (July-August *Technical Bulletin*, page 3) should be "The 9509 (EM) update of AIDSLINE included abstracts..." The remainder of the note and the examples are correct. ❑

Year-End Processing

Introduction

Each year, MEDLINE, its Backfiles, and other MEDLARS databases are updated to reflect changes in the Medical Subject Headings (MeSH) vocabulary. These changes in the MeSH terminology reflect the evolving vocabulary of healthcare and biomedical sciences. NLM also makes other changes as required to database records as part of its "Year-End Processing" effort. The changes become apparent each year when the databases that use MeSH are "class-maintained."

Some searchers will have to make changes to their stored searches used for current awareness retrieval in NLM's Automatic SDI Service to take into account the new terminology. Generally, Grateful Med users do not have to take any action as a result of Year-End Processing. All users may be assured that the annual changes to the vocabulary and other changes made to NLM databases should only facilitate search retrieval.

MEDLINE Backfile Configuration — 1996

During 1995 Year-End Processing, all citations published in 1992 or earlier will be pulled from MEDLINE and placed in the appropriate Backfiles. The primary dates of coverage for MEDLINE and its Backfiles for 1996 will be as follows:

File	Aliases	Coverage
MEDLINE	MED	1993-1996
MED90	M90, BACK90, B90	1990-1992
MED85	M85, BACK85, B85	1985-1989
MED80	M80, BACK80, B80	1980-1984
MED75	M75, BACK75, B75	1975-1979
MED66	M66, BACK66, B66	1966-1974

1996 MeSH

MEDLINE, the MEDLINE Backfiles, and SDILINE files are expected to be available online with 1996 MeSH and 9601 Entry Month (EM) data on Monday, December 11, 1995. CANCERLIT will be available online on that date with 1996 MeSH and the 9512 (EM) update. CATLINE and AVLINE are also expected to be updated with 1996 vocabulary on December 11, 1995. At that time, all searches using MeSH in these databases should conform to any changes introduced with the 1996 Medical Subject Headings.

The HEALTH file will be combined with HSTAR database records in January 1996 to form a new database, HealthSTAR. Records from the HEALTH file will be maintained and updated as part of the new combined database following the merger in January (see Tech Note on page 3). AIDSLINE is also expected to be available with 1996 MeSH and 9601 (EM) data in January after the new HealthSTAR file is available. Other files using MeSH vocabulary (HISTLINE, HSRPROJ, SPACELINE, POPLINE, TOXLINE, DENTALPROJ, and AIDSTRIALS) will be maintained for 1996 vocabulary at later dates. Watch future issues of the *Technical Bulletin* and the online NEWS for announcements.

Changes to the MeSH vocabulary for 1996 are reflected in the various lists contained in the introduction to the *Medical Subject Headings, Annotated Alphabetic List*, for 1996. This publication is available from the National Technical Information Service (NTIS); order information was provided in the July-August issue of the *Technical Bulletin* on page 4. [Editor's Note: See related article, "Coming Attractions - MeSH" in this issue on page 21.]

STORESEARCHes, Automatic SDIs, and Saved Searches

All stored searches (including Automatic SDI stored searches) and saved searches for the ELHILL databases should be reviewed for the impact of any changed and new 1996 MeSH headings or other new features. **Automatic SDI users that explode terms from Category D trees in stored search strategies should be especially careful to review the strategies for the impact of the major changes to the 1996 MeSH Category D drug headings with regard to their Pharmacologic Actions.** [Editor's Note: See related article, New MeSH and Indexing Policy Change for 1996 MeSH Chemical and Pharmacologic Action Headings and Trees in this issue on page 9.]

SDILINE Automatic SDI Searches - MEDLINE Database

SDILINE Automatic SDI stored searches requiring revision due to 1996 MeSH vocabulary changes must be deleted and restored by **Friday, December 1, 1995**, to receive correct retrieval against 1996 monthly updates. The 9601 (EM) SDILINE SDIs will be processed beginning on or about Saturday, December 2, 1995. Searchers should execute their STORESEARCHes online between November 10 and November 30, 1995 to examine retrieval. During this time, the December 1995 SDILINE file will contain 1996 MeSH terms so that searchers can run their STORESEARCHes against this revised SDILINE to check correct operation of stored strategies against the new

vocabulary. Only SDILINE will have 1996 vocabulary terms on citations during this time period; MEDLINE and other databases will not.

To check for the correct operation of stored searches during this designated period, searchers should:

1. Record the number of citations retrieved for each stored search as processed by NLM in the Automatic SDI Program for the December 1995 (9512) SDILINE (available October 21) that uses the **1995** vocabulary. (The number of citations retrieved is listed on the front of each SDI printout received. The name of the stored search is the title of the printout.)

2. Beginning November 10, searchers should go online and run each SDILINE stored search against the December SDILINE, which will contain the same citations but will be indexed to reflect **1996** MeSH vocabulary. (Stored searches are executed by typing the stored search name online qualified by (SN). Be sure you are connected to SDILINE.)

3. Compare the postings retrieved with the records found earlier. If the number of citations (i.e., postings) retrieved is not equal to the number received in the 9512 (EM) SDILINE printouts with 1995 vocabulary, a searcher may assume the stored search has been affected by a 1996 vocabulary change.

4. Searchers should also display the strategy. Use the command DISPLAY with the stored search name. Do not use the (SN) qualifier. For example:

display s601 heart disease

5. Check the terms in your strategy against the various lists of new and replaced MeSH headings which are contained in the introductory section of the *Medical Subject Headings, Annotated Alphabetic List* for 1996. Three of the four lists of new headings ("New Medical Subject Headings with Scope Notes," "New Medical Subject Headings by Subcategory," and "New Medical Subject Headings with Previous Indexing") contain only headings that were not in the 1995 MeSH. They do not include new forms of existing headings; these appear in the list titled, "Replaced Medical Subject Headings with Replaced-By Headings - 1996."

On the list titled "Replaced Medical Subject Headings with Replaced-By Headings - 1996" headings no longer used as indexing terms are listed. Either the form of the heading changed or the entire MeSH record was deleted. In any case, citations which were indexed by the old heading are now indexed by another heading. The replaced term may continue to exist with a new status. P means printed entry term (see reference) to the new heading; N indicates a non-print entry term which may still be used as a search term and remain in any stored/saved search. Terms designated as C (Supplementary Chemical Record) may remain but must be qualified with (NM). Terms with no status indicator may not be used as search terms and must be deleted from all stored and/or saved searches.

Tree numbers should also be checked in the *Medical Subject Headings, Tree Structures* for 1996. CAS® Registry/EC Numbers (RN) and Names of Substances (NM) should be checked in the online NEW MESH database (type **file new mesh**) which contains the 1996 MeSH vocabulary. If the strategies are not too long, searchers may want to type them in line-by-line and evaluate any No Postings messages to isolate the problem area.

6. Purge searches requiring changes (PURGESEARCH searchname). For example:

purgesearch s601 heart disease

Then store the revised strategy (STORESEARCH searchname). For example:

storesearch s601 heart disease

Note: If you purge and store on the same day, be sure to make the name of the new stored search different. It is sufficient to vary the name of the search **by one character (letter or number)** to make the new name unique.

7. All revised SDILINE search strategies for Automatic SDILINE processing should be stored by **December 1, 1995** to ensure correct processing of your 9601 (EM) SDILINE Automatic SDIs.

Other Databases with SDI Service

Other files that currently may have stored searches for Automatic SDI Service are HEALTH, CANCERLIT, CATLINE, AVLINE, AIDSLINE, HSTAR, POPLINE, BIOETHICS, and TOXLINE. These do not have an equivalent of SDILINE; therefore, it is not possible to follow the procedures for the SDILINE database which are described above. You should carefully review any strategies stored for execution by NLM against these databases and identify possible vocabulary revisions. Revised strategies must be stored by the dates listed below.

HEALTH SDIs

The 9512 (EM) HEALTH Automatic SDIs will be the last Automatic SDIs run against the HEALTH database. HEALTH records will then be combined with HSTAR records early in 1996 to create the new database, HealthSTAR. NLM will not update the HEALTH file records with 1996 MeSH vocabulary until after the merger takes place. It is still advisable to review and restore any affected searches during December 1995. Automatic SDIs for 9601 will be processed during or after January 1996, using strategies stored for the HEALTH file against the new HealthSTAR database. Users who run the same strategy against HEALTH and HSTAR should purge the SDIs that begin with the letter "R" using the PURGESEARCH command.

CANCERLIT SDIs

The CANCERLIT database is expected to be updated with the 1996 MeSH vocabulary and the 9512 (EM) update on December 11, 1995. NLM plans to run Automatic SDIs for the CANCERLIT database during the week of December 18. Review and restore any affected searches by December 15.

AIDSLINE SDIs

AIDSLINE is expected to be updated with 1996 MeSH and 9601 (EM) data in January 1996. Changes to Automatic SDI stored searches to be run against the AIDSLINE 9601 (EM) should be made in December 1995. AIDSLINE Automatic SDIs for 9601 (EM) will be processed after the new HealthSTAR database is available so that the 9601 (EM) data will include HEALTH and HSTAR records.

HSTAR SDIs

HSTAR records, like HEALTH records, will be a subfile of the new combined HEALTH and HSTAR database in 1996. NLM will not update the HSTAR records with 1996 MeSH vocabulary until after the merger takes place. However, it is still advisable to review and restore any affected searches during December 1995. HSTAR Automatic SDIs for 9601(EM), like HEALTH Automatic SDIs, will be processed during or after January 1996 against the new database. Users who have had the same strategy run against HEALTH and HSTAR should purge strategies that begin with the letter "R" using the PURGESEARCH command.

CATLINE and AVLINE SDIs

The CATLINE and AVLINE databases are also expected to be updated with 1996 vocabulary on December 11, 1995. Changes to Automatic SDI stored searches run against these databases should be made by Friday, December 29, 1995. Automatic SDIs for these databases (with December 1995 dates of entry) are scheduled to be processed on or about January 2, 1996.

POPLINE SDIs

POPLINE SDI stored searches should not be changed yet. Please see future issues of the *Technical Bulletin* and the online NEWS for announcements about the introduction of the 1996 vocabulary.

TOXLINE SDIs

TOXLINE contains MeSH vocabulary on records in the TOXBIB and BIOSIS subfiles. Stored search strategies for TOXLINE that contain MeSH headings should be reviewed for 1996 MeSH vocabulary changes. Any changes to these strategies should be reviewed and restored by December 6, 1995. NLM plans to run TOXLINE/TOXLIT Automatic SDIs against 9512 (EM) data on December 7, 1995.

Beginning with the TOXLINE 9512 (EM) update in December, records added to both the TOXBIB and the BIOSIS subfiles will contain 1996 MeSH. The 1995 MeSH terms will remain on TOXBIB and BIOSIS records from earlier entry months until the entire TOXLINE file is regenerated sometime in February or March 1996. Watch the ELHILL online NEWS and the *Technical Bulletin* for the date of the regeneration.❑

--prepared by Marcia Zorn
MEDLARS Management Section

New MeSH and Indexing Policy Change for 1996 MeSH Chemical and Pharmacologic Action Headings and Trees

NLM announces several important changes to 1996 chemical MeSH headings and their arrangement in functional, or pharmacological action trees. Specifically, the changes involve:

1996 MeSH Category D5-D26 Chemical Trees relating to functions, or actions;

1996 MeSH chemical descriptor records, with the addition of a new field **Pharmacologic Action (PA)** in the MeSH Vocabulary File; and

1996 Indexing Policy for MeSH chemicals, which is to add the appropriate pharmacologic action heading as well as the specific chemical heading to a citation when the action is discussed in the article.

Information for Searchers

The first part of this article highlights these changes and how they affect searching for MeSH chemicals and their pharmacologic actions in MEDLINE and other databases in the 1996 MEDLARS system.

Searchers and indexers of MEDLINE and other NLM MeSH-based databases will benefit from:

One set of rules to retrieve or index both MeSH chemicals and MeSH Supplementary Chemical Records;

Streamlined Category D trees that are now easier to understand and navigate; and most importantly,

More precise indexing and retrieval made possible by the explicit coordination of chemical headings with their pharmacologic action MeSH Headings beginning with 1996 indexing.

SEARCHERS: Please review online, saved, and stored searches, including Automatic SDI searches, that retrieve chemical MeSH Headings (MH) or pharmacologic action MHs. Be aware of, and take advantage of changes in 1996 MeSH and indexing policy, and of the new Pharmacologic Action Pre-Explosions, for the best results when searching for MeSH chemicals and pharmacologic actions in 1996.

There has been an important change in how MeSH chemicals are treed—the first since 1963 when the trees were introduced. From 1963 through 1995, a chemical was generally treed in two places: in one Tree showing its chemical structure and in a second Tree under its function, or pharmacologic action.

The arrangement of chemical headings in MeSH Trees by chemical structure has not been changed. However, **many MeSH chemical headings have been removed from functional, or pharmacologic action trees.** Compare, for example, the 1995 and 1996 MeSH Trees for Antitubercular Antibiotics in Figure 1 below. Pharmacologic Action headings are highlighted.

1995	
Antibiotics	**D20.85**
Antibiotics, Antitubercular	**D20.85.89**
Capreomycin	D20.85.89.148
Cycloserine	D20.85.89.260
Kanamycin	D20.85.89.464 (+)
Rifabutin	D20.85.89.650
Rifampin	D20.85.89.685
Streptomycin	D20.85.89.790 (+)
Viomycin	D20.85.89.910 (+)
Antitubercular Agents	**D20.338**
Antibiotics, Antitubercular	**D20.338.135**
Capreomycin	D20.338.135.139
Cycloserine	D20.338.135.306
Kanamycin	D20.338.135.501 (+)
Rifabutin	D20.338.135.650
Rifampin	D20.338.135.714
Streptomycin	D20.338.135.810 (+)
Viomycin	D20.338.135.922 (+)

1996	
Antibiotics	**D20.85**
Antibiotics, Antitubercular	**D20.85.89**
Antitubercular Agents	**D20.338**
Antibiotics, Antitubercular	**D20.338.135**

Figure 1 - Comparison of 1995 and 1996 MeSH Trees for Antitubercular Antibiotics

Also, compare the Tree locations for Zinc Oxide in 1995 and 1996 MeSH shown in Figure 2. In 1995 MeSH, the compound Zinc Oxide is placed in two structural and three functional trees. In 1996, Zinc Oxide only appears in two structural MeSH trees:

1995			1996		
Oxides	D1.650.550	structural	Oxides	D1.650.550	structural
Zinc Oxide	D1.650.550.975		Zinc Oxide	D1.650.550.975	
Zinc Compounds	D1.975	structural	Zinc Compounds	D1.975	structural
Zinc Oxide	D1.975.975		Zinc Oxide	D1.975.975	
Sunscreening Agents	D23.695	functional			
Zinc Oxide	D23.695.975				
Dermatologic Agents	D23	functional			
Zinc Oxide	D23.990				
Sunscreening Agents	D26.763.750	functional			
Zinc Oxide	D26.763.750.901				

Figure 2 - Comparison of Tree locations for Zinc Oxide in 1995 and 1996 MeSH

Many MeSH chemicals treed under Pharmacologic Action (PA) headings in 1995 have been assigned one or more pharmacologic action headings in the new Pharmacologic Action (PA) field in 1996 MeSH chemical descriptors. To identify the PAs assigned to a chemical, such as Zinc Oxide, you may read the list of PHARMACOLOGIC ACTION HEADINGS included in the front of the 1996 MeSH Tree Structures on pages I-154 through I-178, or search the MeSH Vocabulary file as shown below in Figure 3:

```
YOU ARE NOW CONNECTED TO THE MESH (1996) VOCABULARY FILE.

USER:

zinc oxide (mh)

PROG:
SS (1) PSTG (1)

USER:
prt mh, pa

PROG:
1
MH - Zinc Oxide
RN - 1314-13-2
DC - 1
MN - D1.650.550.975
MN - D1.975.975
PA - Dermatologic Agents
PA - Sunscreening Agents
```

- Qualify the term with (mh) to avoid multi-meaning messages in the MeSH file.
- PRINT (PRT) displays the new PA field in the 1996 MeSH file.

Figure 3 - Sample search in the MeSH file to identify the PAs assigned to the chemical Zinc Oxide

PAs are valid MeSH Headings, indexed in the MH field of MEDLINE citations, as highlighted in the example in Figure 4:

```
UI - 95270771
AU - Surber C
AU - Itin PH
AU - Bircher AJ
AU - Maibach HI
TI - Topical corticosteroids.
MH - *Dermatologic Agents
MH - *Glucocorticoids, Topical/ADVERSE EFFECTS/PHARMACOLOGY/THERAPEUTIC USE
MH - Human
SO - J Am Acad Dermatol 1995 Jun;32(6):1025-30
```

Figure 4 - PA as a valid MeSH Heading

Also compare Gout Suppressants in the 1995 MeSH Trees (p. 594) and Gout Suppressants in the 1996 MeSH Trees (p. 519) shown below in Figure 5:

1995		1996	
Gout Suppressants	D17.50.337	Gout Suppressants	D17.50.337
Allopurinol	D17.50.337.75 .	Uricosuric Agents	D17.50.337.900
Colchicine	D17.50.337.150		
Indomethacin	D17.50.337.300		
Naproxen	D17.50.337.550		
Uricosuric Agents	D17.50.337.900		
Apazone	D17.50.337.900.37		
Benzbromarone	D17.50.337.900.75		
Probenecid	D17.50.337.900.625		
Sulfinpyrazone	D17.50.337.900.725		
Zoxazolamine	D17.50.337.900.975		

Figure 5 - Comparison of Gout Suppressants in the 1995 and 1996 MeSH Trees

Again, the chemical MeSH Headings (Allopurinol, Colchicine, Indomethacin, etc.) are retained in structural trees, but have been removed from functional trees in 1996 MeSH.

Also note that a PA heading may have a more specific PA heading indented under it. For example, the more specific PA heading, Uricosuric Agents, is indented under Gout Suppressants. In 1996, EXPLODE GOUT SUPPRESSANTS will retrieve:

1. Citations indexed 1966-1995 with Gout Suppressants (MH) or Uricosuric Agents (MH)

The retrieved citations tend to be general articles that either do not discuss any of the specific drugs treed under these PA headings through 1995 MeSH, or discuss so many specific drugs that the broader term was used. Prior to 1996, indexing policy was to avoid adding the PA heading if the specific drug indexed was treed under the PA heading.

and

2. Citations indexed 1996- with Gout Suppressants or Uricosuric Agents (MH)

These include both general articles, and articles indexed with any of the specific drugs that have also been assigned either PA heading because the pharmacologic action was discussed in the article.

Searchers should coordinate MeSH chemical and PA headings for more precise retrieval of citations indexed in 1996 and forward. Chemical and PA headings are searched as MeSH headings (MH).

For example, to search in MEDLINE for 1996 citations that discuss naproxen as a gout suppressant:

search 9601 (EM) SDILINE or later:

```
SS1 /C?
USER:
naproxen and gout suppressants
```

Searchers may explicitly limit a MEDLINE search to 1996 indexed citations by including 1996 Entry Month (EM) values, or Date of Entry (DA) date ranges, e.g.,

```
SS1 /C?
USER:
naproxen and gout suppressants and
9601 (em)       or

SS1 /C?
USER:
naproxen and gout suppressants and
greater than 951019 (da)*
```

* October 19, 1995 = 951019 (DA); this was the last day for indexers to use 1995 MeSH. Include the strategy 'and greater than 951019 (da)' to limit retrieval to citations indexed on or after October 20, 1995, the first day of indexing using 1996 MeSH.

Pharmacologic Action Pre-Explosions Replace EXPLODE To Search MeSH Chemicals and Pharmacologic Actions

EXPLODE can no longer be used with pharmacologic action headings to retrieve citations indexed with that heading or the specific chemical headings formerly treed under it. See the discussion under "How Pharmacologic Action Pre-Explosions Are Generated" on page 15 for more detailed information.

To replace EXPLODE for searching these pharmacologic action headings or their associated chemicals headings, NLM is introducing a new search feature called Pharmacologic Action (PA) Pre-Explosions (PX).

To use a new PA PX, searchers should identify the appropriate PA heading in MeSH, and search it in MEDLINE or other files, qualified by (PX). For example:

```
SS1 /C?
USER:
explode serotonin uptake inhibitors (in 1995)
```

is replaced by:

USER:
serotonin uptake inhibitors (px] (in 1996)

To see the MeSH Headings retrieved by an EXPLODE, refer to the printed 1996 MeSH Tree Structures, or use the TREE command with the MH to be "exploded." The 1995 MeSH Trees are in effect online until Dec. 8, 1995 and through that date responses to TREE commands reflect 1995 Trees. When the new MEDLARS system is implemented online on Dec. 11, 1995, responses to TREE commands will reflect 1996 Trees.

To identify the headings retrieved by a PA (PX) search, refer to the published lists in the 1996 MeSH Tree Structures, or search the 1996 MeSH file for the PA heading qualified by (PA). The 1996 MeSH Vocabulary file will be available online as FILE MESH on December 11, 1995, see Figure 6 below; until then, the 1996 MeSH Vocabulary can be searched online in the New MeSH Vocabulary file (FILE NEW).

USER:
tfile mesh

- Consider TFILE to save current search statements in the database to which you are connected. Use RETURN, e.g., RETURN MED90, to resume searching there.

PROG:
YOU ARE NOW CONNECTED TO THE MESH VOCABULARY (1996) FILE.

SS 1 /C?
USER:
serotonin uptake inhibitors (pa) and d (ry)

- Search the PA heading qualified by **(PA)**—not (MH); combine with Record Type (RY) "d" for MeSH descriptor.

PROG:
SS (1) PSTG (10)

SS 2 /C?
USER:
prt mh

- PRT MH to display the chemical MeSH Headings assigned to that PA.

PROG:
1
MH - Amoxapine

2
MH - Citalopram

3
MH - Clomipramine

4
MH - Fenfluramine

5
MH - Fluoxetine

6
MH - Fluvoxamine

7
MH - Norfenfluramine

8
MH - Paroxetine

9
MH - Trazodone

10
MH - Zimeldine

Figure 6 - Searching file MeSH to identify headings retrieved by a PA

You may also search the 1996 MeSH file to display the PAs that have been assigned to a specific chemical MH, as shown in the zinc oxide example on page 10.

Searchers should note that four former MeSH Pre-Explosions (PX) in 1995 become PA PXs in 1996:

Antibiotics (PX)
Anti-Infective Agents (PX)
Antineoplastic Agents (PX)
Cardiovascular Agents (PX)

These four PA PXs look and act as they did as MH PXs. The difference is only in how their search terms are generated from PA PX tables, rather than from their MeSH Tree Numbers.

Pharmacologic Pre-Explosions are indicated by a large black dot to the left of the MeSH heading entry in the printed 1996 Annotated MeSH, e.g., on p. 56:

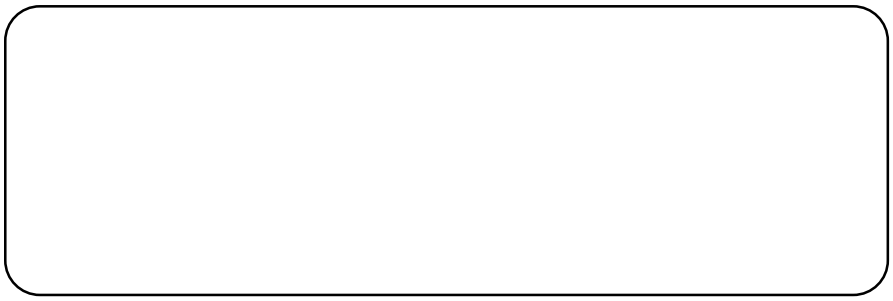


Figure 7 - Pharmacologic Pre-Explosions are indicated by a large black dot in the printed 1996 Annotated MeSH

Use of PA PX, like EXPLODE, will usually retrieve some misleading or undesired retrieval. This is because the chemical headings were placed on MEDLINE citations more frequently than the functional headings under which they were treed, and all citations indexed with these drugs were retrieved in an EXPLODE of a functional heading. For example, EXP PLATELET AGGREGATION INHIBITORS in 1995 would retrieve all citations indexed with ASPIRIN, even though many of these do not discuss aspirin's role as a platelet aggregation inhibitor, or may discuss other roles, such as a non-steroidal anti-inflammatory agent. PA PXs cast a wide net, and searchers must cull the relevant retrieval from the catch. Searchers may further refine these results with additional search criteria such as text words, or may review the retrieval to select the relevant citations.

MEDLINE

MEDLARS searchers must understand that the millions of citations in MEDLINE and other databases indexed before 1996 **have not been reindexed.** New search strategies that coordinate chemicals and their associated pharmacologic action headings yield more precise retrieval of citations indexed in 1996 forward, but will not accurately retrieve citations indexed from 1966-1995.

In MEDLINE and other files such as AIDSLINE, CANCERLIT, HISTLINE, the new HealthSTAR (resulting from the combination of HEALTH and HSTAR) and SPACELINE, citations indexed for 9601 (EM) and later will be added to a database containing large numbers of citations indexed under previous policy. The new search strategy that combines the MeSH chemical and pharmacologic action headings will limit retrieval to citations indexed under the new rules. Some older citations will be retrieved; these are probably relevant but be advised that the retrieval is not comprehensive because of the past policy not to add the PA MH. It is important for searchers to realize that the use of the new strategies alone in files other than SDILINE will automatically limit their searches mainly to citations indexed for 9601 (EM) and later.

Searchers must combine effective strategies specific for accurate and comprehensive retrieval of citations in MEDLINE, or any MeSH-indented database, indexed under either old or new indexing policy.

For example, to search in MEDLINE for Dermatologic Agents there are two approaches:

1. For citations indexed 1996 forward, search PA (MH), e.g.,

   dermatologic agents (mh)

to retrieve not only general citations indexed with this pharmacologic action MH but more significantly, all citations where any specific chemical, e.g., Zinc Oxide, is discussed as a dermatologic agent. Some older citations may also be retrieved if the indexers coordinated with the PA (although not required to by policy).

2. For all citations indexed 1966-1996, search by PA (PX), e.g.,

   dermatologic agents (px)

to retrieve general citations indexed with the PA MH and more significantly, all citations indexed with any of the specific chemical MHs to which Dermatologic Agents has been assigned as a PA, e.g. Zinc Oxide, whether the article discusses its dermatologic role or not, or whether the PA MH itself was assigned or not. Because indexers are coordinating with the PA MH in 1996 and that term is part of the PX, a PX search will also retrieve 1996 data.

To limit retrieval to MEDLINE citations indexed in 1996, to ensure "on-target" retrieval, searchers may include a Date of Entry (DA) date range, e.g.,

```
SS1 /C?
USER:
dermatologic agents (mh) and greater than 951019 (da)
```

To isolate citations indexed before 1996 to further refine the retrieval, or to review them for relevancy, search:

```
SS 2/C?
USER:
dermatologic agents (px) and not 1
```

The (MH) qualifier in the previous examples are not required for searching. They are used here to show the differences between searching a Pharmacologic Action MeSH Heading as (MH) and (PX) in citations indexed beginning with 1996, and those indexed 1966-1995.

SDILINE

The 1996 monthly SDILINE files, 9601 Entry Month (EM) through 9612 (EM), will only contain citations indexed with

1996 MeSH, following 1996 indexing policy. Strategies for online and Automatic SDI searches should reflect new MeSH and indexing policy to obtain more precise retrieval of chemicals and their pharmacologic actions. Because 1996 SDILINE will only contain citations indexed under 1996 MeSH and indexing policy**, PA PXs are not needed to search SDILINE, and are not generated for this database.**

MEDLINE Backfiles

All MEDLINE Backfiles in the 1996 MEDLARS system (MED66, MED75, MED80, MED85 and MED90) will contain ONLY citations indexed before these changes in MeSH and indexing in policy. In general, searchers should remember that coordinating chemical and PA MeSH headings in the MEDLINE Backfiles does not provide comprehensive retrieval. Searchers should use a new PA PX in the place of EXPLODE for searching a pharmacologic action and its associated chemicals. Strategies for Multi-File Searches (MFS) that contain PAs, or PA PXs, should be carefully reviewed to ensure that they are appropriate for all files to be searched.

Summary for Searchers

Significant changes to 1996 D MeSH Category D Tree Structures require searchers to:

- review the streamlined 1996 MeSH Category D Trees;
- note that many specific chemical MeSH headings have been removed from function, or pharmacologic action (PA) trees;
- review online, saved and stored search strategies for MEDLINE, and other MeSH-indexed files if searching for MeSH and their PAs;
- coordinate chemical with pharmacologic action MeSH Headings (MH) in MEDLINE and other files for 1996 citations
- use PA Pre-Explosions (PX) to replace the EXPLODE command, to search for PAs and their associated chemicals in citations indexed from 1966-1995
- use combined strategies--new and old --to search MEDLINE and other files that contain citations indexed before and after 1996.

Searchers are reminded that not everything has changed. Searches for MeSH chemicals not related to their pharmacologic action remains the same. Many Trees in MeSH Category D have not been altered, including chemical structure and endogenous chemical trees.

Searchers will benefit from the increased precision in retrieval when they coordinate specific chemicals with their pharmacologic action headings. There will be fewer false drops, and unsophisticated searchers and Grateful Med searchers are more likely to get the retrieval they want.

This article was written for searchers of MEDLINE and other MeSH-indexed databases in MEDLARS. Those who use MEDLINE in other systems or on CD-ROM should check with the producers for information on how these changes have been reflected in their products.

To allow our users to become familiar with these new features, NLM non-billed practice codes are available for you to try out these new features. Please contact your Regional Online Training Center at 1-800-338-7657 (press #2).

More detailed information on the changes made to 1996 MeSH Category D Trees, and to NLM indexing policy follows.

Changes to 1996 MeSH Category D Headings and Trees

MeSH Category D Trees display hierarchical relationships of MeSH chemicals by **chemical structure** (e.g., Acids, Alkalies, Aluminum Compounds). These **structural** MeSH chemical trees have not been changed. Until 1996, the MeSH Category D Trees also treed MeSH chemical headings under their functional, or **pharmacologic action** headings (e.g., Antidepressive Agents, Anesthetics, Neuromuscular Agents). In 1996, many specific MeSH chemical headings have been removed from functional trees throughout MeSH Tree Category D5-26. A chemical MeSH Heading will be assigned to structural trees only. Structural trees are found primarily in MeSH Tree Category D1-D4, but also occur in other Category D Trees. MeSH Headings (MH) for chemical function groups will be assigned to the proper function-group trees in D5-26. With only a few exceptions, indentions under chemical structure headings will be only chemical structure indentions; indentions under function-group headings will be only function-group headings.

Inconsistencies between chemical mechanisms and functions have also been eliminated in the 1996 Trees. For example, the specific drugs listed under

Monoamine Oxidase Inhibitors

were removed from under Antidepressive Agents, and forward cross references (FX) were added between these two headings. If a drug is both an Antidepressive Agent and an MAO Inhibitor, e.g., Chlorgyline, both PAs are assigned.

The MeSH Section limited its definition of Pharmacologic Actions to functional groups of **exogenous** chemicals (originating outside of living organisms). In many cases, the functions were clear, e.g., therapeutic drug groups including Antiemetics, Anti-Anxiety Agents, or Cardiovascular Agents. Other function groupings, while not necessarily therapeutic, were also included, such as Carcinogens, Pesticides, and Indicators and Reagents. Functions of primarily **endogenous** chemicals (originating within living organisms) were not included as PAs, and their specific headings were retained in the function trees. Endogenous chemicals include Neurotransmitters, Hormones, and Antigens.

PAs were assigned to specific chemical headings to reflect the major indications reported in the clinical literature and found in one or more pharmacologic or therapeutic classification schemes including: *The Merck Index, USP Dictionary of USAN and International Drug Names, The Extra Pharmacopoeia, and AMA, Drug Evaluations Annual, 1994*.

Some inconsistency and overlap results from the attempt to reflect these various authoritative sources. Assignment of a Pharmacologic Action to a MeSH chemical does not indicate or imply its efficacy or endorsement; the lack of a PA in a MeSH chemical record does not indicate or imply that a PA is inappropriate.

Seven new Pharmacologic Action MeSH Headings were added to the 1996 MeSH Vocabulary:

Anti-Allergic Agents
Anti-Asthmatic Agents
Antibiotics, Tetracycline
Antineoplastic Agents, Alkylating
Antineoplastic Agents, Hormonal
Respiratory System Agents
Reverse Transcriptase Inhibitors

NLM welcomes comments from searchers toward greater uniformity and usefulness in MeSH PA descriptors, particularly if they are supported by authoritative information. Please send your suggestions for improving the MeSH Vocabulary via e-mail to:
meshsugg@nlm.nih.gov.

How Pharmacologic Action Pre-Explosions Are Generated

In 1996, there are 314 "true" Pharmacologic Action MeSH Headings that are searchable as PXs. In addition, 30 MeSH Headings that are broader, or "ancestor" headings must be included as PA PXs, in order to include retrieval formerly obtained with the EXPLODE capability.

A "true" PA is a MeSH Heading that occurs as a PA value in at least one MeSH descriptor record. Approximately 2,000 MeSH chemical descriptors have been assigned one or more of these 314 true Pharmacologic Action (PA) headings. In the 1996 PA PX tables, a specific PA PX may retrieve between 1 and 425 specific MeSH Headings in addition to itself. For example, in Figure 8 below:

Thienamycins (PX)	retrieves Thienamycins (MH) and one MeSH drug, Imipenem (MH)
Anti-Infective Agents (PX)	retrieves Anti-Infective Agents (MH) and 425 additional terms, including more specific PAs, and specific drugs assigned to any of these PAs.

Figure 8 - Retrieval for PA PX

In addition, some parents of PA headings are included as PA Pre-Explosions because while they are not themselves PA values, they are parents of PA values, and are required for an inclusive search.

For example, Adrenergic Antagonists is not a true PA heading, but it has two "children" that are PAs: Adrenergic alpha-Antagonists and Adrenergic beta-Antagonists. Therefore, Adrenergic Antagonists is included as a PA (PX).

Adrenergic Agents
  Adrenergic Antagonists
    Adrenergic alpha-Antagonists
    Adrenergic beta-Antagonists

ELHILL EXPLODE and MH Pre-Explosions (PX) use the MeSH Tree Numbers to identify and "OR" together the MH being exploded with the terms indented under it. PA PXs have been created to allow searchers to obtain similar retrieval. PA PXs search the PA on a table that "ORs" together the PA heading with the specific MeSH headings to which it has been assigned. PXs retrieve citations indexed with the PX MeSH heading, and to a much larger extent, with the more specific terms either indented in the MeSH trees under the Pre-Explosion term, or indented in a separate PA table of values. As with any PX (MH, Place of Publication or SH), and with EXPLODE, retrieval obtained with a PA PX search often does not include that specific PA heading in the citation itself.

The main rule for generating PA PXs is the retrieval of all specific headings that contain the PA as a PA value, as well as the PA value itself. This rule ensures the inclusion of most of the 1995 specific headings associated with the broader PA headings.

The PX for a PA with more specific PAs indented under it in the 1996 MeSH Trees will include ALL the specific chemical headings of all PAs. This means that for a Pharmacologic Action Pre-Explosion "H," the following specific headings will be retrieved:

- "H" itself
- specific headings assigned the PA value of "H"
- any PA value itself indented under "H"
- specific headings assigned a PA indented under "H"

1996 Indexing Policy

Indexing of chemicals should be simpler, since the same policy will be followed

for both MeSH descriptor chemicals (main headings) and terms from the Supplementary Chemical Records.

Formerly, for MeSH Headings treed under their function, indexers would not coordinate with the function term. For MeSH chemicals NOT treed under function, indexers could coordinate with the function term. Indexers also found it hard to locate MeSH Headings under appropriate functions, because Category D trees are long, and contain many levels of indentions. MeSH staff found it difficult and time-consuming to maintain MeSH chemical trees.

From 1996 forward, **when indexers index with a chemical MeSH Heading, they must also index with a pharmacologic action MeSH Heading if the pharmacologic action is discussed in the article.** PA terms are only added when appropriate. Only the pharmacologic actions discussed in the article are used for indexing.

Consider these hypothetical "articles" whose titles reflect their content:

"Atropine as a mydriatic"
Atropine/*pharmacology
Mydriatrics/*pharmacology

"The chemistry of atropine"
Atropine/*chemistry

In the first "article" atropine is discussed from the viewpoint of its function and its PA relevant to the article, mydriatics, is indexed. In the second "article" the pharmacologic action of atropine is not discussed, so the indexer does not index with a PA heading assigned to Atropine.

Indexers will coordinate chemical MeSH Headings with any appropriate pharmacologic action heading. **They are not restricted to PAs assigned to the chemical MeSH Heading,** but will refer these cases to the MeSH Section for review and possible addition of this PA to the MeSH chemical record.

The general principles of 1996 NLM Indexing Policy related to MeSH chemicals are summarized below.

- an exogenous chemical is treed only in a structural tree
- an exogenous chemical is no longer treed in a function tree
- only chemicals are indented under chemicals in Category D1-D4 and in other structure trees scattered throughout Category D
- only function groups are indented under function groups in Category D5-26
- a chemical function heading (PA) must be selected by the indexer based on the author's text
- if the article does not discuss a pharmacologic action shown for the drug, then the drug is indexed only under the name of the drug and no PA is supplied by the indexer
- if the author's text discusses a PA not already assigned to the MeSH Heading, then the indexer should index under a MeSH heading which covers the PA described by the author, and refer the new PA to the MeSH section for possible addition to the MeSH descriptor record
- there is no change in indexing policy with regard to choice of IM or NIM (starred or unstarred), the use of subheadings, or the requirement to assign appropriate MeSH Headings in order to cover the content of an article completely.

Pharmacologic Action in Future MEDLARS Systems

As part of the annual MeSH maintenance cycle, MeSH staff will review and revise MeSH chemicals and their associated Pharmacologic Actions found in the literature, and in pharmacology classification schemes.

NLM is now studying the feasibility of a large-scale retrospective maintenance project for the 1997 MEDLARS system to add the appropriate Pharmacologic Action headings to all MEDLARS citations indexed between 1966-1995. This maintenance would enable a consistent search strategy for MeSH chemicals and their functions indexed in MEDLARS citations. It is not yet known if PA Pre- Explosions will be retained, or if this maintenance can be accomplished for the 1997 system.

MeSH Publications

The *Medical Subject Headings Annotated Alphabetic List*, 1996 discusses PA PXs on pages I-74, I-78 through I-80.

The *Medical Subject Headings Tree Structures*, 1996 includes two useful lists:

Pharmacological Action Headings
an alphabetical list of MeSH Pharmacologic Action Headings, with the specific MeSH chemicals that have been assigned that PA, on pages I-154 through I-178, and

Chemicals with Assigned Pharmacological Action Headings
an alphabetical list of all MeSH chemicals that contain a PA field and their Pharmacologic Action Headings, on pages I-179 through I-220.

These lists will also be available as files on the nlmpubs server. Watch for additional information in the ELHILL NEWS, Broadcast messages and $INFO topics, and in future issues of the *Technical Bulletin*.

NLM welcomes your comments and suggestions on these changes, and will assist searchers with questions on search strategies. Please contact the MEDLARS Management Section at:

MEDLARS Service Desk:
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New Author Policy for NLM Indexes and Databases

Background

From 1960 through 1963, *Index Medicus* included all author names. From 1964 through 1977, citations were limited to the first three authors with the full citation appearing under the first author and the additional authors appearing as cross-references to the first. From 1978 through 1983, all (non-transliterated) author names were listed in the Author Section of *Index Medicus* and again, the full citation appeared under the first author with co-references for additional authors. From 1966 through 1984, MEDLINE did not limit the number of authors. From 1984 through 1995, the National Library of Medicine limited the number of author names in both MEDLINE and *Index Medicus* to 10, with "et al" being the eleventh occurrence. In the *Index Medicus* Author Section, the full citation appeared under the first author, and the second through tenth authors were cross-referenced to the first author.

New Policy

Effective with articles published in 1996, the National Library of Medicine will increase the number of author names in MEDLINE and *Index Medicus* from 10 to 25. If there are more than 25 authors for an article, the 25 names listed will be the first 24 named authors and the last author in the sequence. All authors listed between the 24th and the final author will be represented in MEDLINE by "et al." The source for author names is the "author position" of the article; that is, the space between the article title and the text, or immediately above the title.

In the *Index Medicus* Author Section, the full citation will appear under the name of the first author, and the remaining authors (that is, the second through 24th authors and the last author) will be cross-referenced to the first author.

Analysis of the Effect of the New Policy

An examination of a sample of articles having "et al" in the MEDLINE record found that in the majority of articles with more than 10 authors, those with "et al" have a total of 16 or fewer authors. It was found that if the number of authors included were expanded to 16, those citations receiving "et al" would be 10 percent of the previous number with 90 percent of those previously tagged "et al" having all authors included. Expanding the number of authors to 25 retains the complete authorship for virtually all articles indexed.

In 1993, of approximately 360,000 MEDLINE citations, "et al" was applied 4,800 times. Of 380,000 citations in 1994, "et al" appears 4,464 times. "Et al" citations represent less than two percent of the total citations for these years. With the new policy, the number of "et al" citations will be very small and represent much less than one-half of 1 percent.

Exceptions

Although the number of author names input in MEDLINE was not limited to ten until 1984, searchers will find some citations with "et al" in the older MEDLINE backfiles. The majority of these records were input initially with all author names, but subsequent citation maintenance was performed (e.g., correction of a typographical error). Because maintenance of older citations requires the use of contemporary computer programs, the system has stripped supernumerary author names from the record, and substituted "et al" for the eleventh and subsequent author names. Furthermore, some older citations with "et al" may have been added to MEDLINE at a later date, if a missing issue was received and processed under the more restrictive policy.

Fewer than 25 author names will be entered if they must be transliterated from Japanese ideograms or the Cyrillic alphabet. Until 1990, only five transliterated author names were entered. Since 1990, the first 10 transliterated author names have been entered; this policy will not change in 1996. Chinese ideograms for co-authors are not transliterated at all if the journal lists only a single transliterated name in the table of contents.

Corporate Authorship

Although MEDLINE has no special data field for corporate authors, the names of organizations, committees, or collaborative study groups are added at the end of the title field, and are retrievable by Title Field Text Word (TF) searching. No attempt is made to perform authority work for corporate authors; the names are entered as they appear in the author position of the article. ❑

--prepared by Jacque-Lynne Schulman
MeSH Section
and Nancy Wright
Index Section

Full Abstracts in MEDLINE

Background

MEDLINE abstracts are taken directly from the published article in the indexed journal; if the article does not have a published abstract, the National Library of Medicine does not create one. There are no abstracts in the MEDLINE files for material entered before 1975. Past policy on inclusion of abstracts set a limit of 250 words for acceptance. Effective with January 1984 data, i.e., 8401 (EM), two changes were made in this policy:

1. The word limit was expanded to 400 words for abstracts from articles 10 pages or more in length or from articles in the core journals identified by the National Cancer Institute.

2. Abstracts exceeding the 250- or 400-word limit were truncated at the end of the sentence closest to the word limit. One of the following messages appears at the end of a truncated abstract:

(ABSTRACT TRUNCATED AT 250 WORDS)

(ABSTRACT TRUNCATED AT 400 WORDS)

Structured abstracts are not truncated, even if they surpass the 250 or 400 word limit. Structured abstracts use a standardized format incorporating labels (objective, design, etc.) to identify key information from articles they summarize.

New Policy

Effective in January 1996, author abstracts in MEDLINE will no longer be truncated based on the length of the journal article. For example, a 350-word abstract published with a six page article will not be truncated at 250 words, but will include the entire abstract text. The only exception will be the occasional abstract (structured or unstructured) that exceeds the maximum number of characters (4,096) permitted by the NLM online indexing system. Should truncation be necessary, the following message will appear at the end of the abstract:

(ABSTRACT TRUNCATED) ❑

--prepared by Fran Spina
Index Section

Changes to Publication Type (PT) Data

Enhanced CLINICAL TRIAL (PT) Data in MEDLINE Citations

NLM is pleased to continue its cooperative effort with the Cochrane Centers to improve access to references to clinical trials literature in MEDLINE and MEDLINE Backfiles by the addition of clinical trial Publication Types (PT), i.e.,

Randomized Controlled Trial (PT)
Controlled Clinical Trial (PT)

Please note that the broader, or "parent" PT value of Clinical Trial is also added whenever either of the above two PT values is used.

For the 1995 MEDLARS system, NLM added PT data to citations in MEDLINE, MED90, and MED85 that were identified by the Cochrane Centers. For 1996, clinical trial PTs will be added to citations in MEDLINE and all MEDLINE Backfiles.

This year, each record revised by the addition of a clinical trial PT will receive a Record Originator (RO) value of RCT, as well as the Class Update Date (CU) tag of 95 that is applied to every record maintained during Year-End Processing (YEP). The following search strategies may be used to retrieve citations enhanced by the addition of PTs from the Cochrane Centers:

SS 1 /C?
95 (cu) and randomized controlled trial contains rct (ro)

or

SS 1 /C?
95 (cu) and controlled clinical trial contains rct (ro)

Enhanced Clinical Trial PT data in the MEDLINE citations will also be included in ELHILL databases with MEDLINE subsets, such as AIDSLINE, CANCERLIT, HISTLINE, SPACELINE, etc.

Publication Types (PT) Interfiled in the *Annotated MeSH*

As mentioned in the Coming Attractions - MeSH article on pages 21-22 in this issue of the *Technical Bulletin*, Publication Types (PT) are now interfiled with MeSH headings in both the 1996 *Annotated* and "*Black and White" MeSH*. PTs will appear in regular, upper/lower case, bolded typeface, qualified by Publication Type in square brackets. For example, the entry for Retracted Publication is shown below in Figure 1.

The list of Publication Types in the Introduction (starting on page I-17 of the 1996 *Annotated MeSH*) will retain only PTs and their definitions. All other notes appear in the body of the *Annotated MeSH*.

PTs in the MeSH File

Publication Type records in the online MeSH file will contain the form used for searching in MEDLINE, as a non-print BX, so that users are able to retrieve PTs in the MeSH file using the same syntax as in MEDLINE.

For example, the 1996 MeSH file record shown in Figure 1 will include:

MH - Retracted Publication [Publication Type]
DC - 2
BX - Retracted Publication (PT):0:...

The search strategy:

USER:
retracted publication (pt)

will retrieve citations in MEDLINE and other citation files, as well as the PT record in the MeSH file.

English Abstract (PT)

The PT value 'English Abstract' has been deleted from the PT list in the Introduction, but reappears in the body of the *Annotated* and "*Black and White" MeSH* after an absence of several years. However, it remains in the MH field on citation records, and not in the PT. This policy is being reviewed for 1997. ❑

--prepared by Jan Willis
MEDLARS Management Section



Figure 1 - Entry for Retracted Publication PT as seen interfiled with MeSH Headings

Discontinuation of Gene Symbol (GS) Indexing

Beginning with the 9601 Entry Month (EM), NLM will discontinue indexing Gene Symbol (GS) data for MEDLINE citations. Gene Symbol data indexed from 1990-1995 will be retained in MEDLINE, MED90, AIDSLINE, CANCERLIT, HISTLINE, HSTAR and SPACELINE. Searchers are advised, however, that searching for Gene Symbol data in 1996 will not be comprehensive. NLM may retain GS data in MEDLARS citations in 1997 but may not make any of it searchable in order to avoid confusion or inconsistent retrieval. We request comments from searchers on this topic to assist us in our decision. ❑

--prepared by Jan Willis
MEDLARS Management Section

Coming Attractions - MeSH

Over 200 new headings have been added to MeSH for the 1996 indexing and searching year. Five subject areas deserve particular mention:

1. Immunology

The terminology for CD antigens has been significantly revised and expanded for 1996 to reflect current usage. This has resulted in the addition of over 25 new headings, as well as many more changes in existing terminology or tree locations. In addition, 25 assorted immunology terms were added to Categories D, E1, and G4.

2. Pharmacology

Antiparasitic agents, formerly Category D21, were reorganized and are now treed under anti-infective agents (Category D20). The category D21 tree has been replanted with anti-allergic and respiratory system agents. [Editor's note: Please see related article beginning on page 9 of this issue.]

3. Molecular Biology

Continuing the expansion of molecular biology, more than 40 new headings were added. Significant additions in this area include terms for members of the insulin-like growth-factor-binding protein and selectin families, as well as terms for microsatellite repeats and helix-turn-helix motifs. Category D12 has also been enlarged by the addition of several carrier proteins, myelin proteins, and other classes of protein.

4. Alternative Medicine

As part of a cooperative effort with librarians who use MEDLINE and working in conjunction with the NIH Office of Alternative Medicine, the MeSH Section added five new main headings, six new see related relationships, several new see references, and changes in nine annotations. Following are the new MeSH headings for the field of Alternative Medicine:

Acupressure
Health Food
Imagery (Psychotherapy)
Meditation
Therapeutic Touch

The new see related references for Alternative Medicine are:

Chiropractic see related Manipulation, Orthopedic
Fraud see related Quackery
Medicine, Herbal see related Plants, Medicinal
Plants, Medicinal see related Plant Extracts
Psychosomatic Medicine see related Psychophysiologic Disorders
Psychosomatic Medicine see related Psychophysiology

The new see references for Alternative Medicine are:

Ch'i Kung see Breathing Exercises
Qigong see Breathing Exercises
Respiratory Muscle Training see Breathing Exercises

Manipulation Therapy see Manipulation, Orthopedic
Orthopedic Manipulation see Manipulation, Orthopedic

T'ai Chi see Martial Arts

Chung I Hsueh see Medicine, Chinese Traditional
Zhong Yi Xue see Medicine, Chinese Traditional

Prayer Healing see Mental Healing

Mind-Body Relations see Psychophysiology

5. Geography

A review of Category Z geographicals brought about the modification of over 140 headings. Special emphasis was given to scope notes for countries outside the United States and Europe. These scope notes were amended to contain the etymological origin of the name. For each of the Category Z geographicals, the corresponding catalogers' geographical subheading was also generally added or modified.

Short Forms of Descriptors

MeSH has always supplied short forms of descriptors - main headings and cross-references - for ease of typing by indexers, catalogers, and searchers.

Each year we add to the list for their convenience. For 1996 several commonly recurring words in main headings and entry terms were shortened. They are:

Short Form: ENVIR
For every occurrence of the words ENVIRONMENT and ENVIRONMENTAL.

Short Form: INDUST
For every occurrence of the words INDUSTRY, INDUSTRIAL, and INDUSTRIALIZED.

Short Form: INFLAMM
For every occurrence of the words INFLAMMATION and INFLAMMATORY.

Short Form: OCCUP
For every occurrence of the words OCCUPATIONS and OCCUPATIONAL.

Short Form: SERV
For every occurrence of the words SERVICE and SERVICES.
Here's an example:
Health Services can be entered: Health Serv

Additions to Permuted MeSH

The 1995 *Permuted MeSH* listed 43 linguistic roots as well as individual words, e.g., -pulm- to point to CARDIOPULMONARY BYPASS, PULMONARY, etc.

For 1996 three more roots have been added:

-chemistry
example: biochemistry
-edema
example: lymphedema
-thorax
example: pneumothorax

The first will lead to such main headings as BIOCHEMISTRY, IMMUNOHISTOCHEMISTRY, etc.; the second to LYMPHEDEMA, PAPILLEDEMA, etc.; the third to CHYLOTHORAX, HEMOTHORAX, etc.

Publication Types

Publication Types, a class of descriptor created in 1991 that identifies the manner in which published information is presented, are now printed in the body of the *Medical Subject Headings, Annotated Alphabetic List*, see Figure 1 below. This will provide greater visibility to the Publication Types. ❑

--prepared by Philip Passarelli
MeSH Section

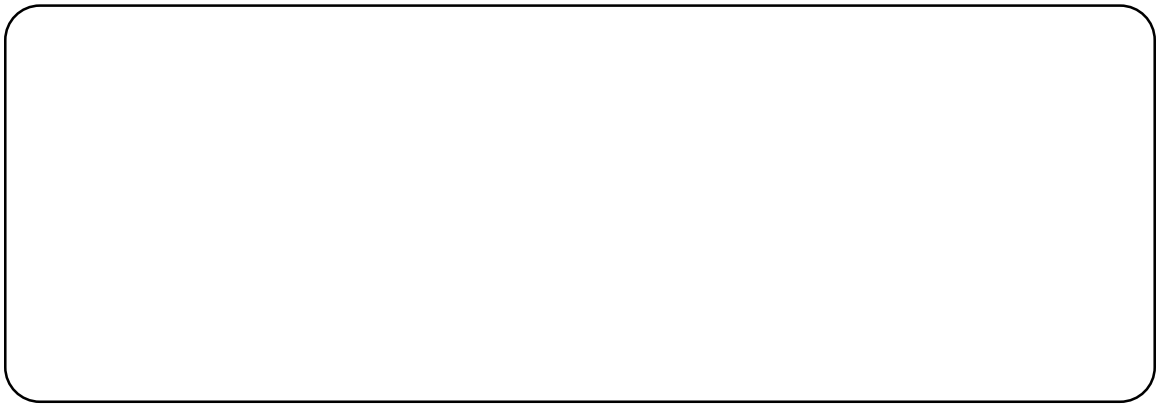


Figure 1 - Publication Type Printed in the Body of *Medical Subject Headings, Annotated Alphabetic List*.

NLM Announces its Z39.50 MEDLINE Server

NLM is making MEDLINE and its Backfiles available through a Z39.50 server implementation beginning November 1, 1995.

Z39.50 is both an American National Standard approved by the National Information Standards Organization (NISO) and an international standard*. It defines the way one computer can query another computer, with the first computer being called a "client" (or origin) and the second a "server" (or target). The Z39.50 protocol provides a uniform procedure for a client computer to access information from various bibliographic databases. This means an organization could use the same Z39.50 client software it employs for searching other data to search MEDLINE as well (as mounted at NLM under the ELHILL retrieval software), without its users having to learn a new interface language.

The NLM Z39.50 server operates over the Internet, allowing access from any computer on the network. There are two requirements: 1. organizations/users must arrange for their own Z39.50 client (NLM's effort has been to develop and maintain the server; NLM is not providing the client), and 2. organizations/users must have regular NLM User ID codes (for which quarterly bills are prepared) or must participate in the NLM Fixed-Fee Program (for which an agreement must be signed). No other charges apply. No other paperwork is necessary. However, NLM encourages those organizations using the Z39.50 MEDLINE server to send in reports about their usage and experiences as an aid to help evaluate this service. Setup instructions can be found on NLM's anonymous ftp server (see below).

The NLM server supports routine searching such as author, MeSH vocabulary (including "explosions" and limiting to the main point of the article), textwords, journal title abbreviations, and dates. It also supports via the Z39.50 SCAN function, a linear browse of the MeSH headings assigned to the MEDLINE citations like that achieved via the ELHILL NEIGHBOR command. Hierarchical browsing of the MeSH Tree Structures is not supported yet. The MEDLINE citations are displayed in either USMARC-compatible format or SUTRS (Simple Unstructured Text Record Syntax) format which is an ELHILL PRINT DL INDENTED command. NLM wants to gain experience with offering MEDLINE and its Backfiles via Z39.50 before any decisions are made about making additional MEDLARS files available.

Your questions and comments on this new MEDLINE access option are invited; the following e-mail addresses may be used:

For technical questions on how the server works and for feedback once you start using the server.
z3950help@nlm.nih.gov

For arranging a fixed-fee agreement for access:
ginter@nlm.nih.gov
or call Ms. Karen Ginter at 301-402-4277.

For comments on the draft mapping of the MEDLINE data elements into USMARC format:
lou_knecht@nlm.nih.gov
or call Ms. Lou Knecht at 301-496-6217

Supporting documentation can be found at:

For application forms for a regular NLM User ID code:

ftp://nlmpubs.nlm.nih.gov in the directory /online/medlars/userid.txt

gopher://gopher.nlm.nih.gov, the path is: Online Services/MEDLARS Information/Application for MEDLARS User ID

OR call 1-800-638-8480.

For instructions about how to set up your client to talk to the NLM Z39.50 server:

ftp://nlmpubs.nlm.nih.gov in the directory /online/z3950srv.txt

gopher://gopher.nlm.nih.gov, the path is: Online Services/Z3950.txt ❑

--prepared by Lou Knecht
Bibliographic Services Division

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*ANSI/NISO Z39.50-1992, Information Retrieval Service and Protocol: American National Standard, Information Retrieval Application Service Definition and Protocol Specification for Open Systems Interconnection, 1992.

ANSI/NISO Z39.50-1995, ANSI Z39.50: Information Retrieval Service and Protocol, 1995.

ISO 10162/10163 International Organization for Standardization (ISO). Documentation - Search and Retrieve Service/Protocol Definition, 1992.

AIDSTRIALS Update

AIDSTRIALS now contains a new field called RESULTS (RSLT). This field, introduced in early October, contains brief bibliographic citations to published reports of the results of the clinical trial described by the overall record. If the published article is indexed in an NLM database, that database is identified and the SI (Secondary Source Identifier) is included in the citation. The RESULTS field serves as a linkage between the published literature and the clinical trials.

RESULTS is a repeating field with each citation in a separate occurrence. Trial results will be found only in closed trials. Initially, only a small portion (about 20%) of the closed trials will have citations in the RESULTS field. More will be added as reports are published or are identified in the literature. It is important to note that not all clinical trials are reported in the published literature. The RSLT field is word searchable within the field. A sample search displaying this new field is shown in Figure 1. ❑

--prepared by Gale Dutcher
Specialized Information Services

```
SS 1 /C?
USER:
file aidstrials

PROG:
YOU ARE NOW CONNECTED TO THE AIDSTRIALS FILE. ...

SS 1 /C?
USER:
*zidovudine and *zalcitabine and *didanosine and closed (oc)      • RESULTS fields only appear
                    in closed trials.
PROG:
SS (1) PSTG (6)

SS 2 /C?
USER:
prt 1 ui, ti, rslt, oc

PROG:

1
UI      -  NIH/00419
TI      -  A Randomized, Comparative Trial of Zidovudine (AZT) Versus AZT Plus Didanosine
           (ddI) Versus AZT Plus Dideoxycytidine (ddC) in HIV-Infected Patients.
RSLT    -  Bacheler L, et al. Int Conf AIDS. 1993 Jun 6-11;9(1):550 (abstract no. PO-B41-2488).
           Cited in AIDSLINE: ICA9/93336142
OC      -  Closed: Patients on drug and followup (940630)

SS 2 /C?
USER:
bacheler (rslt)                                    • The RESULTS field is directly searchable.

PROG:
SS (2) PSTG (1)

SS 3 /C?
USER:
prt ti, rslt

PROG:

1
TI      -  A Randomized, Comparative Trial of Zidovudine (AZT) Versus AZT Plus Didanosine
           (ddI) Versus AZT Plus Dideoxycytidine (ddC) in HIV-Infected Patients.
RSLT    -  Bacheler L, et al. Int Conf AIDS. 1993 Jun 6-11;9(1):550 (abstract no. PO-B41-2488).
           Cited in AIDSLINE: ICA9/93336142
```

Figure 1 - Displaying and searching the RESULTS field

Rebuilding of CATLINE/AVLINE

The rebuilding of the CATLINE and AVLINE databases in December 1995 primarily involves changes to MeSH headings and the elimination of obsolete fields or data values from the databases. In addition, the two databases have been brought closer in parallel by the addition of the Keyword (KW) field to AVLINE and by adjustments to the fields included in various print formats.

These changes should appear online on December 11, 1995 in accordance with the current Year-End Processing schedule.

Data Changes applicable to CATLINE and AVLINE:

1. Changes were made to MeSH headings (MH) in CATLINE and AVLINE corresponding to the changes made in 1996 MeSH. Records that were modified by at least one of these heading changes now contain "95" in the Class Update Date (CU) field.

2. The General Note (GN) "Limited cataloging" was removed from all records which contained this note. This note was a useful feature in the printed catalogs when limited cataloging was first introduced, but it is no longer useful now that NLM's records are distributed in electronic format only.

Records which have received limited level cataloging continue to be distinguishable by the value "L" in the Encoding Level (EL) field. This field is directly searchable.

3. The MARC Indicators (MA) field has been renamed to "Miscellaneous Attributes". The field continues to be directly searchable. The value "A" continues to be used in the Miscellaneous Attributes (MA) field to signify a government publication.

4. The values "MICROFICHE" and "MICROFILM" have been added to the list of valid terms in the Media (ME) field. The appropriate term is being applied to all items cataloged as microreproductions. The ME field is directly searchable.

EXAMPLE:

microfiche (me)

5. Shelving location codes have been added to the Shelving Location (SL) field as shown in the table below:

Location Code	Location Code Definition
MFICHE	MICROFICHE COLLECTION IN GENERAL COLLECTION
MFILM	MICROFILM COLLECTION IN GENERAL COLLECTION
REF/MFICHE	NLM REFERENCE COLLECTION MICROFICHE COLLECTION
REF/MFILM	NLM REFERENCE COLLECTION MICROFILM COLLECTION

Table of Shelving Location Codes Added to the Shelving Location (SL) Field

These coded values are directly searchable.

EXAMPLE:

mfilm (sl)

Data Changes applicable to AVLINE only

1. The Media Description (MD) field has been removed from all records in AVLINE. Previously, this field was used to provide searchable access to the physical characteristics of an item or to the availability of a computer software title in either IBM, Apple, or Macintosh format. The field was little used by either outside searchers or NLM staff and, therefore, these data will no longer be directly searchable.

Information about the physical characteristics of items held at NLM continues to be available in the Collation (CO) field. The CO field is not directly searchable but can be searched using the proximity operator CONTAINS.

SS 1 /C?
USER:
motion picture (me)

PROG:
SS (1) PSTG (4599)

SS 2 /C?
USER:
1 contains b&w (co)

PROG:
SS (2) PSTG (1191)

Similarly, information about the specific model of computer system on which a particular title runs continues to be included in AVLINE records in the General Notes (GN) field. Although the GN field is not directly searchable, the data are retrievable using the proximity operator CONTAINS.

SS 1 /C?
USER:
computer file (me)

PROG:
SS (1) PSTG (1041)

SS 2 /C?
USER:
1 contains ibm (gn)

PROG:
SS (2) PSTG (953)

he Keyword (KW) field has been added as a new data element; it is directly searchable and Text Word searchable as in CATLINE. Used primarily for archival films, the KW field contains terms which are useful descriptors assigned for internal use as an adjunct to the subject headings which appear in the Medical Subject Heading (MH) fields. The terms also complement the Genre descriptors which appear in the General Notes (GN) field prefaced by the label "Genre:".

SS 1/ C?
USER:
film development (kw)

PROG:
SS (1) PSTG (50)

3. In conjunction with the addition of the Keyword (KW) field to AVLINE, the genre descriptors used for archival films are being brought into alignment with *Moving image materials: genre terms*, published by the Motion Picture Broadcasting and Recorded Sound Division, Library of Congress. Because the General Notes (GN) field is not directly searchable, this change should not affect searchers. But should you wish to search for genre, the following example shows how to do this by using the CONTAINS operator.

EXAMPLE:

Existing term:
GN - Genre: Teaching.

Is changed to:
GN - Genre: Instruction.

SS 1 /C?
USER:
motion picture (me)

PROG:
SS (1) PSTG (4599)

SS 2 /C?
USER:
1 contains genre (gn)

PROG:
SS (2) PSTG (1079)

SS 3 /C?
USER:
2 contains instruction (gn)

PROG:
SS (3) PSTG (789)

PRINT Format changes applicable to CATLINE and AVLINE

The CATLINE and AVLINE printing rules were adjusted to correct inconsistencies and to bring the print formats for the databases more in line with one another. A summary of those adjustments appears below.

1. The Initial Year (Y1) has been added to the FULL Print Format in CATLINE and AVLINE.

2. The Country (CY), Last Revision Date (LR), and Major Revision Date (MR) have been added to the FULL Print Format in AVLINE.

3. The newly defined Keyword (KW) field has been added to the FULL Print Format, DETAILED Print Format, and the CC Print Format in AVLINE.

4. The Record Originator (RO) has been deleted from the FULL Print Format in AVLINE.

5. The Dashed-on Entry (DO) has been added to the Standard Print Format in AVLINE.

Searching for Series Title Information in CATLINE and AVLINE

The Series Title field contains all series notes and series added entries which are titles. The data element Series Title (SE) should be searched using the field mnemonic (SE) as a qualifier.

Users are alerted that if terms used as series titles are searched without a field qualifier, the search retrieval may be incorrect. This is especially true for one-word series titles such as "AIDS" or "Cancer" which would map to an existing MeSH heading, as would be in the case in the example shown here:

EXAMPLE:
AIDS (se) — If searched without the qualifier, the term will map to the MeSH Heading "Acquired Immunodificiency Syndrome" and the term used as a series will not be retrieved.

It should be noted that the Series Title (SE) field is also Text Word searchable. Text Word searching is a recommended strategy for searching of titles, including those that are for series. ❑

--prepared by Marti Scheel
Technical Services Division

SERLINE Update

Updated Versions of LJI and LSIOU available via Internet

Updated versions of the *List of Journals Indexed for Index Medicus* (LJI) (contains abbreviated, full title, subject and geographic sections), and the *List of Serials Indexed for Online Users* (LSIOU) are now available from the NLM Gopher and via anonymous ftp from the NLM anonymous ftp server. (Instructions for retrieving NLM publications in electronic format are included in each *Technical Bulletin*. Please consult the table of contents for the page number.) The electronic editions are current as of August 4, 1995.

New Format for LSIOU

In addition, a new version of the LSIOU, which is in tagged format, is also available via gopher and ftp. Titles are sorted alphabetically, and every data element begins on a separate line, preceded by the mnemonic (tag) for the data element. The tagged format will enable users to upload data from the publication and then use it in their local system. A sample record follows in Figure 1.

```
TI      -  AACN CLINICAL ISSUES
TA      -  AACN CLIN ISSUES
AI      -  INI, CNL, MED
AT      -  ADVANCED PRACTICE IN ACUTE AND CRITICAL CARE
CA      -  W1 AA101AP
CY      -  UNITED STATES
FL      -  6N1, FEB 1995—
GN      -  AN OFFICIAL PUBLICATION OF THE AMERICAN ASSOCIATION OF CRITICAL-
           CARE NURSES.  CONTINUES:  AACN CLINICAL ISSUES IN CRITICAL CARE NURSING.
HNOTE   -  INDEXING BEGAN WITH V6N1,FEB 1995.
IS      -  1079-1713
JTC     -  CDM
LEVEL   -  2
LIST    -  N
PL      -  PHILADELPHIA PA
PU      -  J.B. LIPPINCOTT COMPANY
STATUS  -  5
UI      -  SR0083890
```

Figure 1 - Sample Citation in the Format Available via Gopher or Ftp

The data in the tagged formatted version resides in six files. The name of each file begins: "List of Serials Indexed - Tagged Data:" and the part of the alphabet covered is then specified: A-B, C-G, H-J, K-O, P-S, and T-Z. There is also a file that explains the tags used to identify the data, and indicates the maximum length and maximum number of occurrences of each field.

The files may be obtained via anonymous ftp from the host nlmpubs.nlm.nih.gov. These files are in the directory /online/journals. To access the publications through the NLM Gopher, use your local gopher client, or, if that is not available, telnet to the address:

gopher@nlm.nih.gov

First, select Online Services and then Journal Title Lists.

Questions about the content and format of the *List of Journals Indexed for Index Medicus* and the *List of Serials Indexed for Online Users* should be addressed to Esther Baldinger, elb@nlm.nih.gov. Questions about ftping to nlmpubs.nlm.nih.gov should be addressed to:

ftpadmin@nlmpubs.nlm.nih.gov

and questions about the NLM Gopher should be addressed to:

admin@gopher.nlm.nih.gov ❑

--prepared by Esther Baldinger
Technical Services Division

SPACELINE Launched

How long can humans survive in space? How can we counteract the effects of weightlessness, cosmic radiation, and other characteristics of the space environment? Can we productively grow plants in space to provide food for long term habitation? What useful clinical applications are coming out of space research?

The National Library of Medicine (NLM) is pleased to announce the availability of a new database named SPACELINE. The purpose of SPACELINE, a cooperative venture of the Library and the National Aeronautics and Space Administration (NASA), is to consolidate the results of the growing body of space life sciences research into a single, easily accessible resource. Its intended audience is the space life sciences community here and abroad; the medical, scientific, and scholarly communities worldwide with an interest in the field; and the general public.

Scope

SPACELINE is a bibliographic database consisting of references to:

- Clinical medical support to humans in space
- Physiology, metabolism, and growth and development of the cells, organs, and systems of humans, animals, and plants as they are affected by the space environment
- Environmental protection and support of humans in space, including life support, toxicology, and radiation
- Psychological, behavioral, and human factors involved in living in the space environment
- Origin, evolution, and distribution of life in the universe
- Applications of bioengineering to space life sciences research
- Applications of space life sciences research to the improvement of life on Earth

Results of both ground-based and flight research, domestic and international, are included.

Coverage

Types of publications indexed for SPACELINE include: journal articles; technical reports; books and book chapters; conference proceedings, conference papers, and meeting abstracts; bibliographies; and audiovisuals. Sources consist of all references in scope from MEDLINE (1966 to the present), CATLINE, and AVLINE, as well as thousands of citations from 1961 to the present contributed by NASA. Referenced publications included in this database may be in any language.

Database Description

SPACELINE currently contains approximately 90,000 records and will be updated weekly. In addition to the 3,000 NASA citations already in the database, NASA SPACELINE project staff are in the process of converting many more records from an in-house database to SPACELINE format. It is expected that this conversion process, which includes the addition of MeSH indexing, will take several years to complete. NASA project staff are also working to enhance NLM records with a Space Flight/Mission (SFM) field. This field will enable searchers to identify publications arising from particular flights such as Apollo 13, groups of flights such as the Apollo program, or all flights. See the section below on Search Strategy for instructions on searching this field.

With the exception of this SFM field and the NEN field discussed later, search capabilities are identical to those used with MEDLINE. The unit record is shown in Figure 1 and sample records in Figure 2.

Search Strategy

NASA has maintained outside contracts since the early 1960's to collect publications pertaining to space life sciences, including the publications of all NASA-funded investigators. References to these publications have been kept in a variety of database formats since then and reached a total of approximately 18,000 records when NASA began discussion with NLM to make these references available to a wider audience. NASA SPACELINE staff are at work eliminating records that are duplicated in NLM databases and converting the remaining records to SPACELINE format on a systematic basis. They are also adding new records in a variety of publication types from both the domestic and international literature that meet the database scope requirements.

In addition to the NASA-supplied records, SPACELINE contains relevant citations pulled from NLM's MEDLINE, CATLINE, and AVLINE databases. The table in Figure 3 lists those primary MeSH terms that are used in the search strategy, as well as the journal abbreviations for those titles in MEDLINE from which all articles are taken. The actual strategies used consist of over twenty separate searches. In addition, a great many Text Words are included in the searches because a number of space-related headings were not added to MeSH until recently. Consult the "New Medical Subject Headings" sections of the 1995 *Medical Subject Headings: Annotated Alphabetic List* for these new terms.

As discussed above, NASA project staff are adding a Space Flight/Mission (SFM) field to NLM records as well as their own. This field is directly searchable in two ways: (1) users may locate all citations that were produced as a result of a particular space flight by searching for the flight name qualified by SFM. For example:

Cosmos 782 (sfm) or STS-30 (sfm)

To search for all publications from a series of flights, truncate on the flight name. For example:

all Cosmos: (sfm)

(2) the SFM field may be used to identify manned or unmanned flights as well as those of short duration or long duration (30 or more days). For example:

manned (sfm)
long duration (sfm)

Users may also search for publications produced for any flight by entering "Flight Experiment (SFM)" online in command mode or by typing "F" on the FLIGHT EXPTS line in the Grateful Med®, Input form screen for the PC version or by clicking on the Flight Experiments button in the Macintosh version. Please note, however, that it will be some time before NASA project staff will be able to complete the task of adding this field to all relevant citations.

One other field of note being added to SPACELINE records is the NASA experiment identifier (NEN). This is a unique number assigned by NASA to each experiment conducted during a space flight/mission. The NEN field displays in both PRT FULL and PRT DL. If a publication is retrieved in SPACELINE has an NEN, other publications on the same experiment may be located by searching on this number. For example:

178127 (nen)
COS 782-13 (nen)
284020 (nen)

As with the SFM field, NASA project staff are still working to add this number to all appropriate records.

Access

Online access to SPACELINE, which is being billed at the same rate as MEDLINE, is available to anyone holding a valid NLM User ID code. Searchers may issue a "File SPACELINE" or "File SPACE" command at an ELHILL system prompt or may choose SPACELINE from the database display in Grateful Med.

Updates to both the PC and Macintosh versions of Grateful Med which will enable SPACELINE searching are being sent to all users along with the new 1996 MeSH files in December. Users who do not wish to wait until then to search SPACELINE through Grateful Med may obtain a copy of the SPACELINE screens (**not** the 1996 vocabulary) from NTIS (800-423-9255) by asking for PB95-505301 (PC) or PB95-505319 (Mac). Loansome Doc users will be able to request MEDLINE-derived articles, identified by "MED/" in the Unique Identifier field.

To obtain documents found in SPACELINE, materials located from MEDLINE, CATLINE, and AVLINE records (SI=MED, CAT, AV) should be retrieved in the same manner as other NLM documents. For materials indexed specially for SPACELINE (SI=NASA): (1) standard journal and monographic materials should be obtained from user's libraries or through interlibrary loan; (2) most NASA technical reports are available from NTIS and the NTIS accession number has been included in the SPACELINE record in the Availability Note (AVN) field; and (3) documents unobtainable from standard sources may be requested from the NASA SPACELINE office (see below), which will provide them on a cost recovery basis.

Questions

A SPACELINE office has been established on behalf of NASA at the Uniformed Services University of the Health Sciences (USUHS) in Bethesda, Maryland. Questions concerning SPACELINE scope and coverage should be directed there. Office staff may be reached at:

telephone: 301-295-2482
fax: 301-295-5271
e-mail:
SPACELINE@USUHSB.USUHS.MIL

or by writing to:

SPACELINE
Department of Physiology
USUHS
4301 Jones Bridge Road
Bethesda, MD 20814-4799

For assistance with SPACELINE search questions or in using Grateful Med software, please contact the MEDLARS Service Desk (800-638-8480 or mms@nlm.nih.gov). ❑

--prepared by Karen Patrias
Public Services Division

CATEGORY QUALIFIER	ELEMENT NAME	SEARCH STATUS	PRINT	PRINT FULL	PRINT DL
AA	ABSTRACT AUTHOR	*	N	N	Y
AB	ABSTRACT	TW	N	N	Y
AD	ADDRESS	AD	N	N	Y
AS	AUTHORSHIP STATEMENT	TW	N	Y	Y
AU	AUTHOR	*	Y	Y	Y
AVN	AVAILABILITY NOTE		N	Y	Y
BN	ISBN	*,NX	N	N	Y
CA	CALL NUMBER	*,NX	N	Y	Y
CM	COMMENTS	*	Y	Y	Y
CN	CORPORATE NAME	*,TW	Y	Y	Y
CNA	CONFERENCE NAME	*,TW	Y	Y	Y
CNS	CONFERENCE NAME AS SUBJECT	*,TW	N	N	Y
CO	COLLATION		N	N	Y
CS	CORPORATE NAME AS SUBJECT	*,TW	N	N	Y
CU	CLASS UPDATE DATE	*	N	N	Y
CY	COUNTRY	*	N	N	Y
DA	DATE OF ENTRY	*,R	N	N	Y
DI	DISSERTATION NOTE		N	Y	Y
DP	DATE OF PUBLICATION	*	N	N	Y
EA	ENGLISH ABSTRACT INDICATOR		N	N	Y
ED	EDITION		Y	Y	Y
EM	ENTRY MONTH	*,R	N	N	Y
GN	GENERAL NOTES		N	Y	Y
GS	GENE SYMBOL	*,GS	N	N	Y
ID	ID NUMBER	*	N	N	Y
IF	IITRI/FRANKLIN NUMBER		N	N	Y
IM	IMPRINT	TW	N	N	Y
IP	ISSUE/PART/SUPPLEMENT		N	N	Y
IS	ISSN	*	N	N	Y
JC	JOURNAL TITLE CODE	*	N	N	Y
KW	KEYWORDS	*,KF,TW	N	N	Y
LA	LANGUAGE	*	N	Y	Y
LC	LC CARD NUMBER	*,NX	N	N	Y
LR	LAST REVISION DATE	*,R	N	N	Y
ME	MEDIA	*	N	N	Y
MH	MESH HEADING	*,MHF,TW	N	Y	Y
MI	MONOGRAPHIC INFORMATION	TW	N	N	Y
MN	MESH TREE NUMBER	*	N	N	N
MR	MAJOR REVISION DATE	*	N	N	Y
NEN	NASA EXPERIMENT IDENTIFIER	*	N	Y	Y
NI	NO-AUTHOR INDICATOR		N	N	Y
NM	NAME OF SUBSTANCE	*,TW,NF	N	Y	Y
PG	PAGINATION		N	N	Y
PN	PERSONAL NAME	*	N	N	Y
PS	PERSONAL NAME AS SUBJECT	*	N	Y	Y
PT	PUBLICATION TYPE	*	N	Y	Y
RF	NUMBER OF REFERENCES		Y	Y	Y
RN	CAS REGISTRY/EC NUMBER	*	N	Y	Y
RO	RECORD ORIGINATOR	*	N	N	Y
RY	RECORD TYPE	*	N	N	Y
SB	JOURNAL SUBSET	*	N	N	N
SE	SERIES TITLE	*,TW,NX	N	N	Y
SFM	SPACE FLIGHT/MISSION	*,TW	Y	Y	Y
SH	SUBHEADINGS	*	N	Y	Y
SI	SECONDARY SOURCE ID	*	Y	Y	Y
SO	SOURCE		Y	Y	Y
TA	TITLE ABBREVIATION	*	N	N	Y

Figure 1 - SPACELINE Unit Record

CATEGORY QUALIFIER	ELEMENT NAME	SEARCH STATUS	PRINT	PRINT FULL	PRINT DL
TI	TITLE	TW,TF	Y	Y	Y
TT	TRANSLIT/VERNAC TITLE		N	Y	Y
UA	UNIFORM TITLE ADDED ENTRY	*,TW	N	N	Y
UI	UNIQUE IDENTIFIER	*,R	N	N	Y
UT	UNIFORM TITLE	*,TW	N	Y	Y
UTS	UNIFORM TITLE AS SUBJECT	*,TW	N	N	Y
VI	VOLUME ISSUE		N	N	Y
YR	YEAR	*	N	N	N

KEY:

*	=	DIRECTLY SEARCHABLE	N = NO
TW	=	TEXT WORD SEARCHABLE	Y = YES
TF	=	TITLE FIELD TEXT WORDS	R = RANGEABLE
MHF	=	MESH HEADING FRAGMENTS	
AD	=	ADDRESS FRAGMENT SEARCHABLE	
NF	=	NAME FRAGMENT SEARCHABLE	
GS	=	GENE SYMBOL FRAGMENT SEARCHABLE	
KF	=	KEYWORDS FIELD TEXT WORDS	
NX	=	NUMBER INDEX SEARCHABLE	

NOTES:

PRINT AR is also available. It prints SI, AU, CN, CNA, TI, ED, SFM, AB, RF, CM, SO.
The SFM field contains the flight/mission name and/or number. This field is included when results of research conducted in space are covered or when an experiment manifested (scheduled) for a future space mission is discussed. Type $INFO SFM for detailed information on this field.
The NEN field contains the unique number assigned by NASA to each experiment conducted during a space flight/mission. Type $INFO NEN for information on this field.
Pre-explosions (PX) may be used in this database.
The KEYWORDS (KW) field is not being utilized at this time.

Figure 1 - SPACELINE Unit Record cont.

Journal Articles:

SI - MED/85135800
AU - Popov IG ; Latskevich AA
TI - [Effect of a space diet on valine concentrations in the blood]
SO - Kosm Biol Aviakosm Med. 1985 Jan-Feb;19(1):8-19.

SI - NASA/00016481
AU - Taylor GR
TI - Immune changes in humans concomitant with space flights of up to 10 days duration.
SFM - STS:manned:short duration
SFM - Apollo 13:manned:short duration
SFM - Salyut 6:manned:long duration
SFM - Salyut 7:manned:long duration
SFM - Soyuz:manned:short duration
SFM - Flight Experiment
RF - REVIEW ARTICLE: 14 refs.
SO - Physiologist. 1993;36(1 Suppl):S71-4.

Abstract:

SI - NASA/00015859
AU - Morey-Holton E ; Cone C ; Doty S ; Vailas A
TI - Biomineralization and spaceflight [abstract]
SFM - TS-40:manned:short duration ; Flight Experiment
SO - ASGSB Bull. 1992 Oct;6(1):99.

Meeting Paper:

SI - NASA/00015742
AU - Gibson EK Jr ; Chang S
CNA - Exobiology in Solar System Exploration (1988 Aug 24-26 : Sunnyvale, CA)
TI - The Moon: biogenic elements.
SO - In: Carle GC, Schwartz DE, Huntington JL, eds. Exobiology in solar system exploration. Moffett Field,
CA : NASA Ames Research Center, 1992. p. 29-43. (NASA Special Publication ; 512)

Book:

SI - CAT/9306184
AU - Nicogossian AE ; Huntoon CL ; Pool SL
TI - Space physiology and medicine.
ED - 3rd. ed.
SO - Philadelphia : Lea & Febiger, 1994. xx, 481 p. : ill.

Technical Report:

SI - NASA/00014623
AU - Shinn JL ; Wilson JW
CN - United States. National Aeronautics and Space Administration. Langley Research Center
TI - An efficient HZETRN (a galactic cosmic ray transport code).
SO - Washington, DC : NASA Headquarters, 1992. 14 p. : ill. (NASA Technical Paper ; 3147)

Audiovisual:

SI - AV/9430709
CN - American Medical Informatics Association
TI - Medical informatics & the U.S. space program.
SO - Elkridge, MD : Chesapeake Audio/Video Communications, [1993?] 2 sound cassettes : analog.

Figure 2 - Sample SPACELINE Citations

MeSH Headings Used Primarily in Their Entirety:

Aerospace Medicine;
Altitude Sickness; Astronauts;
Atmosphere Exposure Chambers;
Auxins; Biogenesis;
Exp Bone Demineralization, Pathologic;
Bone Demineralization Technique;
Bone Remodeling/physiology;
Cardiovascular Deconditioning;
Coriolis Effect; Coriolis Force;
Cosmic Radiation; *Decompression;
Decompression/adverse effects;
Decompression Sickness;
*Diving/adverse effects;
*Diving/physiology;
Ecological Systems, Closed;
Embolism, Air/physiopathology;
Extraterrestrial Environment;
Extravehicular Activity; Exobiology;
Exp Gravitation; Gravitropism;
Gravity Perception;
Hair Cells, Vestibular;
Head-Down Tilt; Hydroponics;
*Hypercapnia; Hyperoxia;
*Hypotension, Orthostatic;
Immersion/adverse effects;
Immersion/physiopathology;
Immobilization;
Linear Energy Transfer;
Lower Body Negative Pressure;
Minor Planets; Motion Sickness;
Muscle Fibers, Fast-Twitch;
Muscle Fibers, Slow-Twitch;
Muscular Atrophy/prevention & control;
Muscular Atrophy/metabolism;
Otolithic Membrane; Plant Root Cap;
Exp *Plants/radiation effects;
Reflex, Vestibulo-Ocular;
*Sensory Deprivation/physiology;
Space Flight; Space Motion Sickness;
Space Simulation; Spacecraft;
Submarine Medicine;
United States National Aeronautics a#d Space Administration;
Weightlessness Countermeasures;
Weightlessness Simulation

MeSH Headings Used in Combination with Other Terms:

Exp Acceleration; Acclimatization;
Adaptation, Physiological;
Anaerobiosis; Antarctic Regions;
Exp Archaeobacteria; Arctic Regions;
Baroreflex; Bed Rest; Biodegradation;
Biomechanics;
Exp Bone a#d Bones/physiology;
Bone Density;
Exp Bone Development; Bone Matrix;
Exp Bone Remodeling;
Calcification, Physiologic;
Cardiac Output;
Exp Cardiovascular System/physiology;
Exp G9.330 [Cardiovascular System Physiology];
Circadian Rhythm; Convection;
Embolism, Air; Energy Transfer;
Equilibrium; Eukaryotic Cells;
Exp *Evolution; *Exercise/physiology;
Eye Movements; Exertion; Fluid Shifts;
Functional Residual Capacity; G Suits;
Hair Cells; Hibernation; Hindlimb;
Hyperbaric Oxygenation; Hypokinesia;
Integrins; Labyrinth;
Life Support Systems;
Motion Perception; Exp Movement;
Muscle Denervation; Muscle Proteins;
Muscles/physiology;
Muscular Atrophy;
Nystagmus, Optokinetic; Orientation;
Osteogenesis; Oxygen/toxicity;
Particle Accelerators;
Exp Photosynthesis;
Physical Conditioning, Animal;
Exp Planets; Exp Posture;
Proprioception;
Pulmonary Circulation;
Pulmonary Diffusing Capacity;
Pulmonary Gas Exchange;
Residual Volume; *Respiration;
Respiratory Mechanics/physiology;
Rotation; Saccule a#d Utricle;
Semicircular Canals;
Signal Transduction; Sleep;
*Social Isolation; Space Perception;
Stress, Mechanical;
Ventilation Perfusion Ratio;
Vestibular Nerve; Vestibular Nuclei;
Vestibule; Visual Perception;
Weight-Bearing

MEDLINE Journal Title Abbreviations from Which All Citations Are Included in SPACELINE

Adv Space Biol Med
Aerosp Med
AMRL TR
Aviakosm Ekolog Med
Aviat Space Environ Med
Kosm Biol Aviakosm Med
Kosm Biol Med
NASA Contract Rep NASA CR
NASA Tech Memo
Orig Life
Orig Life Evol Biosph
Probl Kosm Biol
Rep US Nav Submar Med Ctr
Rep US Navy Exp Diving Unit
Riv Med Aeronaut Spaz
Space Life Sci
Tech Doc Rep U S Air Force Syst Command Electron Syst Div
Tech Note U S Natl Aeronaut Space Adm
Tech Rep NAVTRADEVCEN
Tech Rep SAM-TR
Undersea Biomed Res
Undersea Hyperb Med
US Nav Aerosp Med Inst

Figure 3 - Search Strategy Table

UPDATE on NLM's Implementation of USMARC Bibliographic Format Integration Phase II

The information in this article is primarily of interest to users of NLM bibliographic records as found in bibliographic utilities such as OCLC (Online Computer Library Center) and RLIN (Research Libraries Information Network) and other library services agencies. Bibliographic records found in the NLM ELHILL files (e.g. CATLINE and AVLINE) are not affected.

NLM expects to carry out the internal implementation of Phase II of USMARC bibliographic format integration, which primarily affects the Leader and fixed length fields 001-008, by March 1, 1996. USMARC formatted records from CATLINE and AVLINE which conform to the changes resulting from Phase II will begin to be distributed to subscribers of NLM tape products shortly thereafter and should appear in the bibliographic utilities that license NLM data according to vendor-established schedules.

This schedule was adopted to coincide with the implementation of Phase II by the Library of Congress as well as by several licensees of CATLINE and AVLINE data in USMARC format.

Additional information about NLM's implementation of this final phase of USMARC bibliographic format integration and its schedule will be announced in the January-February 1996 issue of the *Technical Bulletin*. ❑

--prepared by Marti Scheel
Technical Services Division

SERIALS UPDATE

Indexed Titles Updated, July-August 1995

The following titles cited in MEDLINE, HEALTH, and HSTAR have recently been selected for indexing, undergone a title change, or ceased publication. This list is not cumulative; the information provided is only for titles whose status has changed since the last UPDATE. More detailed information may be found in SERLINE. For further information, please contact MMS or Ms. Esther Baldinger, Technical Services Division at 301-496-3784 or elb@nlm.nih.gov.

Serials Update information may also be obtained by anonymous ftp from the host nlm.pubs.nlm.nih.gov. The file is in the directory /online/journals. The same Update information may also be obtained from the NLM Gopher; first gopher to gopher.nlm.nih.gov, then select Online Services, then select Journal Title Lists. Questions about ftp from the NLM anonymous server should be addressed to:

ftpadmin@nlmpubs.nlm.nih.gov

and questions about the NLM Gopher should be addressed to:

admin@gopher.nlm.nih.gov

Titles Selected for Indexing, July-August 1995

IM ACADEMIC EMERGENCY MEDICINE
ACAD EMERG MED
1,1994—
HANLEY AND BELFUS
PHILADELPHIA PA UNITED STATES
OFFICIAL JOURNAL OF THE SOCIETY FOR ACADEMIC EMERGENCY MEDICINE.
INDEXING BEGAN WITH V1N1,1994.
W1 AC33ND 1069-6563
SR0077933 JC: CE1

IM ADVANCES IN RENAL REPLACEMENT THERAPY
ADV REN REPLACE THER
1N1,APR 1994—
W.B. SAUNDERS
PHILADELPHIA PA UNITED STATES
A JOURNAL OF THE NATIONAL KIDNEY FOUNDATION. FREQUENCY VARIES.
INDEXING BEGAN WITH V1N1,APR 1994.
W1 AD83P 1073-4449
SR0080238 JC: CE2
W.B. SAUNDERS CO.
6277 SEA HARBOR DR.
ORLANDO FL 32891

IM CANCER GENE THERAPY
CANCER GENE THER
1N1,MAR 1994—
APPLETON AND LANGE
NORWALK CT UNITED STATES
INDEXING BEGAN WITH V1N1,MAR 1994.
W1 CA679UCJ 0929-1903
SR0078463 JC: CE3
KLUWER ACADEMIC PUBLISHERS GROUP
DISTRIBUTION CENTER
3300 AH DORDRECHT
NETHERLANDS

IM EXPERIMENTAL MYCOLOGY
EXP MYCOL
1N1,1977—
ACADEMIC PRESS
ORLANDO FL UNITED STATES
INDEXING BEGAN WITH V19N1,MAR 1995.
W1 EX506R 0147-5975
SR0051550 JC: CE4
ACADEMIC PRESS
6277 SEA HARBOR DR.
ORLANDO FL 32887-4900

IM GASTROENTEROLOGIA Y HEPATOLOGIA
GASTROENTEROL HEPATOL
1,1978—
EDICIONES DOYMA
BARCELONA SPAIN
VOL. 16, NO.4 (APRIL 1993)
MISNUMBERED VOL.17, NO. 4.
INDEXING BEGAN WITH V18N1,JAN 1995.
W1 GA456 0210-5705
G01730000 JC: CE5

IM INTERNATIONAL JOURNAL OF UROLOGY
INT J UROL
1N1,MAR 1994—
CHURCHILL LIVINGSTONE
TOKYO JAPAN
OFFICIAL JOURNAL OF THE JAPANESE UROLOGICALASSOCIATION.
FREQUENCY VARIES.
INDEXING BEGAN WITH V1N1,MAR 1994.
W1 IN7915M 0919-8172
SR0081480 JC: CE6
CHURCHILL LIVINGSTONE JAPAN
K.I.T.BLDG.
2-8-16 YUTENJI
MEGURO-KU
TOKYO 153
JAPAN

IM JOURNAL OF CARDIOVASCULAR RISK
J CARDIOVASC RISK
1N1,JUN 1994—
CURRENT SCIENCE
LONDON ENGLAND
INDEXING BEGAN WITH V1N1,JUN 1994.
W1 JO5763 1350-6277
SR0079141 JC: CE7

IM JOURNAL OF INFUSIONAL CHEMOTHERAPY
J INFUS CHEMOTHER
1,1991—
CURAFLEX HEALTH SERVICES
ONTARIO CA UNITED STATES
IMPRINT VARIES.
INDEXING BEGAN WITH V5N1,WINTER 1995.
W1 JO708 1060-0051
SR0071833 JC: CE8
JOURNAL OF INFUSIONAL CHEMOTHERAPY
125 PARKER HILL AV
BOSTON MA 02120

IM MEDINFO
MEDINFO
1974—
NORTH HOLLAND PUBLISHING
AMSTERDAM NETHERLANDS
CONFERENCE SPONSORED BY THE INTERNATIONAL FEDERATION FOR INFORMATION PROCESSING.
INDEXING BEGAN WITH V8,1995.
W3 ME424N
M23820000 JC: CFG

IM NEUROGASTROENTEROLOGY AND MOTILITY
NEUROGASTROENTEROL MOTIL
VOL. 6, NO. 1 (MAR. 1994)-
BLACKWELL SCIENTIFIC
OSNEY MEAD ENGLAND
CONTINUES: JOURNAL OF GASTROINTESTINAL MOTILITY. THE OFFICIAL JOURNAL OF THE EUROPEAN GASTROINTESTINAL MOTILITY SOCIETY.
INDEXING BEGAN WITH V7N1,MAR 1995.
W1 NE328GB 1350-1925
SR0080990 JC: CE9
BLACKWELL SCIENTIFIC PUBLICATIONS LTD.
JOURNAL SUBSCRIPTION DEPARTMENT
MARSTON BOOK SERVICES
PO BOX 87
OXFORD OX2 0DT
ENGLAND

Titles Selected for Indexing, July-August 1995

IM SEMINARS IN SPEECH AND LANGUAGE
SEMIN SPEECH LANG
4N1,FEB 1983—
THIEME STRATTON
NEW YORK NY UNITED STATES
CONTINUES IN PART: SEMINARS--SPEECH, LANGUAGE, HEARING.
INDEXING BEGAN WITH V16N1,FEB 1995.
W1 SE489M 0734-0478
S19385000 JC: CFB
THIEME-STRATTON INC.
381 PARK AVE. SO.
NEW YORK NY 10016

IM WOMENS HEALTH DATA BOOK
WOMENS HEALTH DATA BOOK
[1ST ED.],1992—
ELSEVIER
NEW YORK NY UNITED STATES
FIRST ED. LACKS DESIGNATION.
SUPPLEMENT TO: WOMENS HEALTH ISSUES. A PROFILE OF WOMENS HEALTH IN THE UNITED STATES. VOLS. FOR 1992- ISSUED BY: JACOBS INSTITUTE OF WOMENS HEALTH.
INDEXING BEGAN WITH 1992.
W1 WO538
SR0084526 JC: CEO
ELSEVIER SCIENCE INC.
ATTN: C. SIDDIQUI
PO BOX 882
NEW YORK NY 10160-0206

Title Changes, July-August 1995

IM GENERAL AND DIAGNOSTIC PATHOLOGY
GEN DIAGN PATHOL
VOL. 141, 1 (MAY 1995)-
GUSTAV FISCHER VERLAG
JENA GERMANY
CONTINUES: ZENTRALBLATT FUR PATHOLOGIE.
INDEXING BEGAN WITH V141N1,MAY 1995.
W1 ZE783
SR0084824 JC: CFD

IM GENETIC ANALYSIS
GENET ANAL
12N1,MAR 1995—
ELSEVIER
AMSTERDAM NETHERLANDS
CONTINUES: GENETIC ANALYSIS, TECHNIQUES AND APPLICATIONS.
INDEXING BEGAN WITH V12N1,MAR 1995.
W1 GE277
SR0084362 JC: CEK

NOTE: This title had been reported as Genetic Analysis,Biomolecular Engineering, in the July-August issue of the *Technical Bulletin*.

IM GENOME RESEARCH
GENOME RES
5N1,AUG 1995—
COLD SPRING HARBOR LABORATORY PRESS
COLD SPRING HARBOR NY UNITED STATES
CONTINUES: PCR METHODS AND APPLICATIONS.
INDEXING BEGAN WITH V5N1,AUG 1995.
ON ORDER-TITLECHANGE
SR0084535 JC: CES

IM HEART
HEART
75,1996—
BMJ PUBLISHING GROUP
LONDON ENGLAND
CONTINUES: BRITISH HEART JOURNAL.
INDEXING BEGAN WITH V75N1,JAN 1996.
ON ORDER-TITLECHANGE
1355-6037
SR0084506 JC: CEN

IM JOURNAL OF OBSTETRICS AND GYNAECOLOGY
J OBSTET GYNAECOL
21N1,FEB 1995—
UNIVERSITY OF TOKYO PRESS
TOKYO JAPAN
OFFICIAL JOURNAL OF: THE ASIA AND OCEANIA FEDERATION OF OBSTETRICS AND GYNAECOLOGY.
CONTINUES: ASIA-OCEANIA JOURNAL OF OBSTETRICS AND GYNAECOLOGY.
INDEXING BEGAN WITH V20N1,FEB 1995.
ON ORDER-TITLECHANGE
1340-9654
SR0084596 JC: CEW

INI JOURNAL OF TRAUMA NURSING
J TRAUMA NURS
1N2,OCT/DEC 1994—
NURSECOM
PHILADELPHIA, PA UNITED STATES
THE OFFICIAL JOURNAL OF THE SOCIETY OF TRAUMA NURSES.
OTHER TITLE: JTN, AND: STNS JOURNAL OF TRAUMA NURSING.
CONTINUES: STNS JOURNAL OF TRAUMA NURSING.
INDEXING BEGAN WITH V1N2,OCT-DEC 1994.
W1 ST527 1078-7496
SR0085159 JTC: CFL

IM PREPARATIVE BIOCHEMISTRY AND BIOTECHNOLOGY
PREP BIOCHEM BIOTECHNOL
26N1,FEB 1996—
MARCEL DEKKER
NEW YORK NY UNITED STATES
CONTINUES: PREPARATIVE BIOCHEMISTRY.
INDEXING BEGAN WITH V26N1,FEB 1996.
ON ORDER-TITLECHANGE
1082-6068
SR0084633 JC: CFC

HLI RUSS COILES HEALTH TRENDS
RUSS COILES HEALTH TRENDS
7N4,FEB 1995—
ASPEN PUBLISHERS
FREDERICK MD UNITED STATES
CONTINUES: HOSPITAL STRATEGY REPORT.
INDEXING BEGAN WITH V7N4,FEB 1995.
ON ORDER-TITLECHANGE
SR0084573 JC: CEU

Titles No Longer Indexed, July-August 1995

IDL ANESTHESIA AND PAIN CONTROL IN DENTISTRY
ANESTH PAIN CONTROL DENT
1N1,WINTER 1992-2N4,FALL 1993
QUINTESSENCE PUBLISHING
CAROL STREAM IL UNITED STATES
OFFICIAL JOURNAL OF THE INTERNATIONAL FEDERATION OF DENTAL ANESTHESIOLOGY SOCIETIES AND EUROPEAN FEDERATION FOR THE ADVANCEMENT OF ANAESTHESIA IN DENTISTRY.
INDEXING BEGAN WITH V1N1,1992.
W1 AN217KG 1055-7601
SR0071853 JC: BMF

IM CHRONOBIOLOGIA
CHRONOBIOLOGIA
1,1974-21,1994
ASSOCIATED CHRONOBIOLOGIA RESEARCHERS
MILANO ITALY
INDEXING BEGAN WITH V1N1,JAN-MAR 1974.
W1 CH972 0390-0037
C20700000 JC: D7P

IM DIABETES RESEARCH
DIABETES RES
1N1,MAY 1984—
TEVIOT-KIMPTON PUBLICATIONS
EDINBURGH SCOTLAND
INDEXING BEGAN WITH V1N1,1984 AND CEASED WITH V27N4,1994.
W1 DI167R 0265-5985
D09270000 JC: DIA

IM DIABETES RESEARCH AND CLINICAL PRACTICE. SUPPLEMENT
DIABETES RES CLIN PRACT SUPPL
1,1985—
ELSEVIER SCIENTIFIC PUBLISHERS
LIMERICK IRELAND
IMPRINT VARIES: AMSTERDAM, (1985-1992).
INDEXING BEGAN WITH V1,1985 AND CEASED WITH V1,1991.
W1 DI167TA 0168-8227
SR0057621 JC: DRC

IM FAMILY PRACTICE RESEARCH JOURNAL
FAM PRACT RES J
1N1,FALL 1981-14N4,DEC 1994
HUMAN SCIENCES PRESS
NEW YORK NY UNITED STATES
FREQUENCY VARIES. VOLS. FOR WINTER 1981-
ISSUED WITH TITLE: FAMILY PRACTICE RESEARCH JOURNAL. VOLS. FOR FALL 1981-WINTER 1986 CO-SPONSORED BY THE MICHIGAN ACADEMY OF FAMILY PHYSICIANS AND BY THE FAMILY HEALTH RESEARCH, EDUCATION AND SERVICE INSTITUTE; VOLS.FOR SPRING 1987- BY THE CALIFORNIA, MICHIGAN, MINNESOTA, AND OHIO ACADEMIES OF FAMILY PHYSICIANS. VOL. 8 (1988-89) COMPLETE IN TWO ISSUES.
INDEXING BEGAN WITH V5N3, SPRING 1986.
W1 FA454CP 0270-2304
F01095000 JC: 123

IM FORTSCHRITTE AUF DEM GEBIETE DER RONTGENSTRAHLEN UND DER NEUEN BILDGEBENDEN VERFAHREN. ERGANZUNGSBAND
FORTSCHR GEB RONTGENSTRAHLEN NEUEN BILDGEB VERFAHR ERGANZUNGSBD
130,1992
GEORG THIEME VERLAG
STUTTGART GERMANY
SUPPLEMENT TO: ROFO. FORTSCHRITTE AUF DEM GEBIETE DER RONTGENSTRAHLEN UND DER NEUEN BILDGEBENDEN VERFAHREN.
CONTINUES: FORTSCHRITTE AUF DEM GEBIETE DER RONTGENSTRAHLEN UND DER NUKLEARMEDIZIN. ERGANZUNGSBAND.
INDEXING BEGAN WITH V130,1992.
W1 FO814
SR0078649 JC: BWK

HLI HEALTH MANAGEMENT QUARTERLY
HEALTH MANAGE Q
FALL 1984-1986N4,9N1,1987-16N4,1994
BAXTER FOUNDATION
DEERFIELD IL UNITED STATES
CONTINUES: HOSPITAL MANAGEMENT QUARTERLY.
INDEXING BEGAN WITH FALL,1984.
W1 HE413Q 0091-323X
SR0053511 JC: HMS

HLI INTERNATIONAL JOURNAL OF PARTIAL HOSPITALIZATION
INT J PARTIAL HOSP
1N1,JAN 1982-8N2,DEC 1992
PLENUM
NEW YORK NY UNITED STATES
INDEXING BEGAN WITH V1N1, JAN 1982.
W1 IN771ND 0272-4308
I27643000 JC: GTB

INI NURSING EDUCATORS MICROWORLD
NURS EDUC MICROWORLD
1N5,JUN/JUL 1987-8N2,MAR/APR 1994
DISKOVERY, COMPUTER-ASSISTED HEALTHCARE EDUCATION
SARATOGA CA UNITED STATES
IMPRINT VARIES. CONTINUES: NURSE EDUCATORS MICROWORLD. ABSORBED BY: INTERACTIVE HEALTHCARE NEWSLETTER.
INDEXING BEGAN WITH V2N4,APR-MAY 1988.
W1 NU5954 0893-1356
SR0061847 JC: OCU

HLI SLOAN MANAGEMENT REVIEW
SLOAN MANAGE REV
12,1970—
MASSACHUSETTS INSTITUTE OF TECHNOLOGY
CAMBRIDGE MA UNITED STATES
CONTINUES IMR. INDUSTRIAL MANAGEMENT REVIEW.
INDEXING BEGAN WITH V16N3,1975 AND CEASED WITH V35N4,SUMMER 1994.
W1 SL585 0019-848X
S27340000 JC: UTP

The Following Entry Has Been Reopened

IM BIOFACTORS
BIOFACTORS
1N1,1988—
IOS PRESS
AMSTERDAM NETHERLANDS
IMPRINT VARIES.
INDEXING BEGAN WITH V1N1,1988.
W1 BO664C 0951-6433
SR0060823 JC: AEB

APPENDIX A

1996 WEEKLY UPDATE SCHEDULE FOR MEDLINE

Entry Month	Updated MEDLINE Available	Date of Entry (DA) Ranges
9601 (EM)	Dec 11	951020-951122*
9602 (EM)	Dec 30	951123-951228
9603 (EM)		
Part 1	Jan 6	951229-960104
Part 2	Jan 13	960105-960111
Part 3	Jan 20	960112-960118
Part 4	Jan 27	960119-960125
9604 (EM)		
Part 1	Feb 3	960126-960201
Part 2	Feb 10	960202-960208
Part 3	Feb 17	960209-960215
Part 4	Feb 24	960216-960222
9605 (EM)		
Part 1	Mar 2	960223-960229
Part 2	Mar 9	960301-960307
Part 3	Mar 16	960308-960314
Part 4	Mar 23	960315-960321
Part 5	Mar 30	960322-960328
9606 (EM)		
Part 1	Apr 6	960329-960404
Part 2	Apr 13	960405-960411
Part 3	Apr 20	960412-960418
Part 4	Apr 27	960419-960425
9607 (EM)		
Part 1	May 4	960426-960502
Part 2	May 11	960503-960509
Part 3	May 18	960510-960516
Part 4	May 25	960517-960523
9608 (EM)		
Part 1	Jun 1	960524-960530
Part 2	Jun 8	960531-960606
Part 3	Jun 15	960607-960613
Part 4	Jun 22	960614-960620
Part 5	Jun 29	960621-960627

Entry Month	Updated MEDLINE Available	Date of Entry (DA) Ranges
9609 (EM)		
Part 1	Jul 6	960628-960703*
Part 2	Jul 13	960704-960711*
Part 3	Jul 20	960712-960718
Part 4	Jul 27	960719-960725
9610 (EM)		
Part 1	Aug 3	960726-960801
Part 2	Aug 10	960802-960808
Part 3	Aug 17	960809-960815
Part 4	Aug 24	960816-960822
Part 5	Aug 31	960823-960829
9611 (EM)		
Part 1	Sep 7	960830-960905
Part 2	Sep 14	960906-960912
Part 3	Sep 21	960913-960919
Part 4	Sep 28	960920-960926
9612 (EM)		
Part 1	Oct 5	960927-961003
Part 2	Oct 12	961004-961010
Part 3	Oct 19	961011-961017
Part 4	Oct 26	961018-961024
9701 (EM)	Dec 9	961025-961120*

*Modified because of holiday

Search hint: To run weekly updates to a search, use the pattern shown below, where SS 1: represents your completed search strategy.

On August 3 - SS 1: AND 9610 (EM)
On August 10 - SS 1: AND 9610 (EM) AND FROM 960802 TO 960808 (DA)
On August 17 - SS 1: AND 9610 (EM) AND FROM 960809 TO 960815 (DA)
On August 24 - SS 1: AND 9610 (EM) AND FROM 960816 TO 960822 (DA)
On August 31 - SS 1: AND 9610 (EM) AND FROM 960823 TO 960829 (DA)

APPENDIX B

1996 MONTHLY UPDATE SCHEDULE FOR NLM DATABASES

Entry Month	SDILINE Available	POPLINE Available	CANCERLIT Available	TOXLINE /LIT Available	BIOETH-ICSLINE Available
9601	Dec 11	Jan 6	Jan 6	Jan 13	*
9602	Dec 30	Feb 10	Feb 3	Feb 10	Jan 20
9603	Jan 27	Mar 9	Mar 2	Mar 9	*
9604	Feb 24	Apr 6	Apr 6	Apr 13	Mar 16
9605	Mar 30	May 4	May 4	May 11	*
9606	Apr 27	Jun 8	Jun 1	Jun 8	May 18
9607	May 25	Jul 6	Jul 6	Jul 13	*
9608	Jun 29	Aug 10	Aug 3	Aug 10	Jul 20
9609	Jul 27	Sep 7	Sep 7	Sep 14	*
9610	Aug 31	Oct 5	Oct 5	Oct 12	Sep 21
9611	Sep 28	Nov 9	Nov 2	Nov 9	*
9612	Oct 26	Dec 7	Dec 9	Dec 14	Nov 16

For MEDLINE updates, see the "1996 Weekly Update Schedule for MEDLINE."

For AIDSLINE updates, see the "1996 Update Schedule for AIDSLINE."

* BIOETHICSLINE is updated every two months.

See ELHILL and TOXNET Online News for confirmation of these updates and for updates to files not listed here.

Use $INFO UPDATES to retrieve a list of MEDLARS databases showing the date of last update and total number of records for each.

Note: Because of the expected merger of the HEALTH and HSTAR files, neither file is represented in these 1996 schedules.

APPENDIX C

1996 UPDATE SCHEDULE FOR AIDSLINE

Entry Month	Updated AIDSLINE Available
9601 (EM)	Jan 6**
9602 (EM)	Jan 6**
9603 (EM)	
Part 1	Jan 13
Part 2	Jan 20
Part 3	Jan 27
Part 4	Feb 6*
9604 (EM)	
Part 1	Feb 3
Part 2	Feb 10
Part 3	Feb 17
Part 4	Feb 24
Part 5	Mar 5*
9605 (EM)	
Part 1	Mar 2
Part 2	Mar 9
Part 3	Mar 16
Part 4	Mar 23
Part 5	Mar 30
Part 6	Apr 9*
9606 (EM)	
Part 1	Apr 6
Part 2	Apr 13
Part 3	Apr 20
Part 4	Apr 27
Part 5	May 7*
9607 (EM)	
Part 1	May 4
Part 2	May 11
Part 3	May 18
Part 4	May 25
Part 5	Jun 4*

Entry Month	Updated AIDSLINE Available
9608 (EM)	
Part 1	Jun 1
Part 2	Jun 8
Part 3	Jun 15
Part 4	Jun 22
Part 5	Jun 29
Part 6	Jul 9*
9609 (EM)	
Part 1	Jul 6
Part 2	Jul 13
Part 3	Jul 20
Part 4	Jul 27
Part 5	Aug 6*
9610 (EM)	
Part 1	Aug 3
Part 2	Aug 10
Part 3	Aug 17
Part 4	Aug 24
Part 5	Aug 31
Part 6	Sep 10*
9611 (EM)	
Part 1	Sep 7
Part 2	Sep 14
Part 3	Sep 21
Part 4	Sep 28
Part 5	Oct 8*
9612 (EM)	
Part 1	Oct 5
Part 2	Oct 12
Part 3	Oct 19
Part 4	Oct 26
Part 5	Nov 5*

*The last update portion of AIDSLINE includes data derived from CANCERLIT, BIOETHICSLINE (bimonthly), CATLINE, AVLINE and the new combined file, HealthSTAR, when the schedule is confirmed. The other update portions are the MEDLINE-derived data.

Please note that the last update portion to complete the Entry Month routinely occurs about 3 days after Part 1 of the next Entry Month is added, e.g., Part 5 of 9609 (EM) is added August 6 after Part 1 of 9610 (EM) which is added on August 3.

**Subject to change.

APPENDIX D

APPENDIX E

1996 MeSH HEADING PRE-EXPLOSIONS

PRE-EXPLODED MeSH HEADING	TREE NUMBER(S)
Abnormalities	C16.131
Adult	M1.471.116
Aged	M1.471.116.100
Amino Acids	D12.125
Anesthesia	E3.155
Antibodies	D24.611.125
Bacteria	B3
Bacterial Infections	C1.252
Behavior	F1.145
Behavior a#d Behavior Mechanisms	F1
Behavioral a#d Mental Disorders	F3
Biochem Phenom Metab	G6
Blood Proteins	D12.776.124
Brain	A8.186.211
Carbohydrates	D9.203
Cardiovascular Diseases	C14
Cardiovascular System	A7
Cells	A11
Central Nervous System	A8.186
Central Nervous System Diseases	C10.228
Chemistry, Analytical	E5.196; H1.181.278
Child	M1.471.392
Circulatory, Respiratory Physiology	G9
Dentistry	E6; G2.163
Diagnosis	E1
Diagnosis, Laboratory	E1.223
Digestive System Diseases	C6
Enzymes	D8.586
Epidemiologic Methods	E5.318; G3.850.520
Equipment a#d Supplies	E7
Gastrointestinal Diseases	C6.405
Genetics	G1.273.343; G5
Health Facilities	N2.278
Health Personnel	M1.526.485; N2.360
Health Services	N2.421
Heart Diseases	C14.280
Hormones	D6.472
Immune System	A15.382

Immunity	G4.610
Immunologic Factors	D24.611
Infant	M1.471.392.520
Invertebrates	B1
Lipids	D10.516
Mammals	B2.649
Mental Disorders	F3.709
Metabolic Diseases	C18.452
Metals	D1.552; J1.637.517
Miscellaneous Techniques	E5
Musculoskeletal Diseases	C5
Musculoskeletal System	A2
Neoplasms	C4
Nervous System	A8
Nervous System Diseases	C10
Neurologic Manifestations	C10.597; C23.888.592
Organization a#d Administration	N4.452
Physiology, General	G7
Proteins	D12.776
Psychologic Processes Principles	F2
Public Health	G2.403.790.548.560; G3.850; N1.407.540.740
Quality of Health Care	N4.761; N5.715
Reproduction, Urogenital Physiology	G8
Respiratory Tract Diseases	C8
Rodentia	B2.649.865
Signs a#d Symptoms	C23.888
Skin Diseases	C17.800
Steroids	D4.808
Stomatognathic Diseases	C7
Surgery, Operative	E4
United States *	Z1.107.567.875
Vascular Diseases	C14.907
Vertebrate Viruses	B4.909
Vertebrates	B2
Virus Diseases	C2
Viruses	B4
Wounds a#d Injuries	C21.866

* When United States is the subject of an article.
To retrieve articles published in the United States, at any USER: prompt, enter United States (CY).

MeSH Heading Pre-explosions are searchable only by the Pre-explosion Name (PX) or *Pre-explosion Name (PX) and not by the tree number(s). See also Subheading Pre-explosions and Place of Publication Pre-explosions in Appendixes E and F respectively.

APPENDIX F

FAMILIES OF 1996 SUBHEADING PRE-EXPLOSIONS

adverse effects
- poisoning
- toxicity

analysis
- blood
- cerebrospinal fluid
- isolation & purification
- urine

anatomy & histology
- blood supply
- cytology
  - pathology
  - ultrastructure
- embryology
  - abnormalities
- innervation

chemistry
- agonists
- analogs & derivatives
- antagonists & inhibitors
- chemical synthesis

complications
- secondary

cytology
- pathology
- ultrastructure

diagnosis
- pathology
- radiography
- radionuclide imaging
- ultrasonography

embryology
- abnormalities

epidemiology
- ethnology
- mortality

etiology
- chemically induced
- complications
  - secondary
- congenital
- embryology
- genetics
- immunology
- microbiology
  - virology
- parasitology
- transmission

metabolism
- biosynthesis
- blood
- cerebrospinal fluid
- deficiency
- enzymology
- pharmacokenetics
- urine

microbiology
- virology

organization & admin
- economics
- legislation & jurisprudence
- manpower
- standards
- supply & distribution
- trends
- utilization

pharmacology
- adminstration & dosage
- adverse effects
  - poisoning
  - toxicity
- agonists
- antagonists & inhibitors
- contraindications
- diagnostic use
- pharmacokinetics

physiology
- genetics
- growth & development
- immunology
- metabolism
  - biosynthesis
  - blood
  - cerebrospinal fluid
  - deficiency
  - enzymology
  - pharmacokinetics
  - urine
  - physiopathology
  - secretion

statistics & numer data
- epidemiology
  - ethnology
  - mortality

surgery
- transplantation

therapeutic use
- administration & dosage
- adverse effects
- contraindications
- poisoning

therapy
- diet therapy
- drug therapy
- nursing
- prevention & control
- radiotherapy
- rehabilitation
- surgery
  - transplantation

Note: See the reverse side of this appendix for the short forms of the subheading pre-explosions used in searching.

ALPHABETIC LIST OF 1996 SUBHEADING PRE-EXPLOSIONS

FULL NAME	SHORT FORM	FULL NAME	SHORT FORM
adverse effects&	AE&	metabolism&	ME&
analysis&	AN&	microbiology&	MI&
anatomy & histology&	AH&	organization & admin&	OG&
chemistry&	CH&	pharmacology&	PD&
complications&	CO&	physiology&	PH&
cytology&	CY&	statistics & numer data&	SN&
diagnosis&	DI&	surgery&	SU&
embryology&	EM&	therapeutic use&	TU&
epidemiology&	EP&	therapy&	TH&
etiology&	ET&		

Final ampersand (&) and the qualifier (PX) are needed to search; either the full name or short form may be used.
The asterisk (*) may not be used in front of a subheading pre-explosion.

APPENDIX G

PLACE OF PUBLICATION PRE-EXPLOSIONS

- Africa
  - Africa, Northern
    - Algeria
    - Egypt
    - Libya
    - Morocco
    - Tunisia
  - Africa, South of the Sahara
    - Africa, Central
      - Cameroon
      - Central African Republic
      - Chad
      - Congo
      - Equatorial Guinea
      - Gabon
      - Zaire
    - Africa, Eastern
      - Burundi
      - Djibouti
      - Eritrea
      - Ethiopia
      - Kenya
      - Rwanda
      - Somalia
      - Sudan
      - Tanzania
      - Uganda
    - Africa, Southern
      - Angola
      - Botswana
      - Lesotho
      - Malawi
      - Mozambique
      - Namibia
      - South Africa
      - Swaziland
      - Zambia
      - Zimbabwe
    - Africa, Western
      - Benin
      - Burkina Faso
      - Cote d'Ivoire
      - Gambia
      - Ghana
      - Guinea
      - Guinea-Bissau
      - Liberia
      - Mali
      - Mauritania
      - Niger
      - Nigeria
      - Senegal
      - Sierra Leone
      - Togo
- Central America
  - Belize
  - Costa Rica
  - El Salvador
  - Guatemala
  - Honduras
  - Nicaragua
  - Panama
- North America
  - Canada
  - Greenland
  - Mexico
  - United States
- South America
  - Argentina
  - Bolivia
  - Brazil
  - Chile
  - Colombia
  - Ecuador
  - French Guiana
  - Guyana
  - Paraguay
  - Peru
  - Suriname
  - Uruguay
  - Venezuela
- West Indies
  - Antigua
  - Bahamas
  - Barbados
  - Cuba
  - Dominican Republic
  - Haiti
  - Jamaica
  - Martinique
  - Netherlands Antilles
  - Puerto Rico
  - Trinidad and Tobago
  - Virgin Islands of the United States
- Asia
  - Asia, Central
    - Kazakhstan
    - Kyrgyzstan
    - Tajikistan
    - Turkmenistan
    - Uzbekistan
  - Asia, Southeastern
    - Borneo
    - Brunei
    - Cambodia
    - Indonesia
    - Laos
    - Malaysia
- Asia, (cont'd)
  - Asia, Southeastern (cont'd)
    - Mekong Valley
    - Myanmar
    - Philippines
    - Singapore
    - Thailand
    - Timor
    - Vietnam
  - Asia, Western
    - Bangladesh
    - Bhutan
    - India
    - Middle East
      - Afghanistan
      - Bahrain
      - Iran
      - Iraq
      - Israel
      - Jordan
      - Kuwait
      - Lebanon
      - Oman
      - Qatar
      - Saudi Arabia
      - Syria
      - Turkey
      - United Arab Emirates
      - Yemen
    - Nepal
    - Pakistan
    - Sri Lanka
  - Far East
    - China
      - Tibet
    - Hong Kong
    - Japan
    - Korea
    - Macao
    - Mongolia
    - Taiwan
- Europe
  - Andorra
  - Austria
  - Belgium
  - Europe, Eastern
    - Albania
    - Baltic States
      - Estonia
      - Latvia
      - Lithuania
    - Bosnia-Herzegovina
    - Bulgaria
    - Byelarus

PLACE OF PUBLICATION PRE-EXPLOSIONS, cont.

Europe (cont'd)
- Europe, Eastern (cont'd)
  - Croatia
  - Czech Republic
  - Hungary
  - Macedonia (Republic)
  - Moldova
  - Poland
  - Romania
  - Russia
  - Slovakia
  - Slovenia
  - Ukraine
  - Yugoslavia
- Finland
- France
- Germany
- Gibraltar
- Great Britain
  - England
  - Northern Ireland
  - Scotland
  - Wales

Europe (cont'd)
- Greece
- Iceland
- Ireland
- Italy
- Liechtenstein
- Luxembourg
- Monaco
- Netherlands
- Portugal
- San Marino
- Scandinavia
  - Denmark
  - Norway
  - Sweden
- Spain
- Switzerland
- Transcaucasia
  - Armenia
  - Azerbaijan
  - Georgia (Republic)

Indian Ocean Islands
- Comoros
- Madagascar
- Mauritius
- Reunion
- Seychelles

Pacific Islands
- Melanesia
  - Fiji
  - New Caledonia
  - Papua New Guinea
  - Vanuatu
- Micronesia
  - Guam
  - Palau
- Polynesia
  - Pitcairn Island
  - Samoa
    - American Samoa
    - Western Samoa
  - Tonga

Alphabetic List of Place of Publication Pre-explosions

Africa&
Africa, Central&
Africa, Eastern&
Africa, Northern&
Africa South of the Sahara&
Africa, Southern&
Africa, Western&
Asia&
Asia, Central&
Asia, Southeastern&
Asia, Western&
Baltic States&
Central America&
China&
Europe&
Europe, Eastern&
Far East&
Great Britain&
Indian Ocean Islands&
Melanesia&
Micronesia&
Middle East&
North America&
Pacific Islands&
Polynesia&
Samoa&
Scandinavia&
South America&
Transcaucasia&
West Indies&

Ending ampersand (&) and the qualifier (PX) are needed to search. The asterick (*) may <u>not</u> be used in front of a place of publication pre-explosion.

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```
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gopher.nlm.nih.gov
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Questions?

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NLM Internet Directory

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GenBank Molecular Sequence Database Information	info@ncbi.nlm.nih.gov
Gopher and e-mail File Server Assistance	admin@gopher.nlm.nih.gov
Grateful Med	gmhelp@gmedserv.nlm.nih.gov
History of Medicine Division	hmdref@nlm.nih.gov
Interlibrary Loan (ILL)/DOCLINE Assistance	ill@nlm.nih.gov
International Programs Office	siegel@nlm.nih.gov
MEDLARS Management Section	mms@nlm.nih.gov
MeSH Heading Suggestions	meshsugg@nlm.nih.gov
National Center for Biotechnology Information (NCBI)	info@ncbi.nlm.nih.gov
National Information Center on Health Services	
Research and Health Care Technology (HSTAR/HSTAT):	nichsr@nlm.nih.gov
Office of Public Information	publicinfo@occshost.nlm.nih.gov
Online Images from the History of Medicine	oli@nlm.nih.gov
Planning and Evaluation Office	siegel@nlm.nih.gov
Preservation Information	pres@nlm.nih.gov
Reference Assistance	ref@nlm.nih.gov
Technical Services Division	tsd@nlm.nih.gov
Toxicology Information Program	toxmail@tox.nlm.nih.gov

NLM Internet Access

TELNET	
MEDLARS, PDQ & TOXNET	medlars.nlm.nih.gov
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HSTAT	text.nlm.nih.gov
FTP	
MEDLARS Server	medlars.nlm.nih.gov
NLM Anonymous Server	nlmpubs.nlm.nih.gov
TOOLS	
Mosaic (WWW)	http://www.nlm.nih.gov/
Gopher	gopher.nlm.nih.gov
e-mail Based File Server	files@mailserv.nlm.nih.gov

WE VALUE YOUR OPINION.
We'd like to hear your compliments and concerns.

NAME: **USER ID CODE:** | | | | | |

ADDRESS:

COMMENTS:

We work for you. Please tell us what is right and what you would like to see changed.

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You MUST include your User ID Code: | | | | | | |

Mailing Information:

Address:

Daytime Phone:

Billing Information, if different:

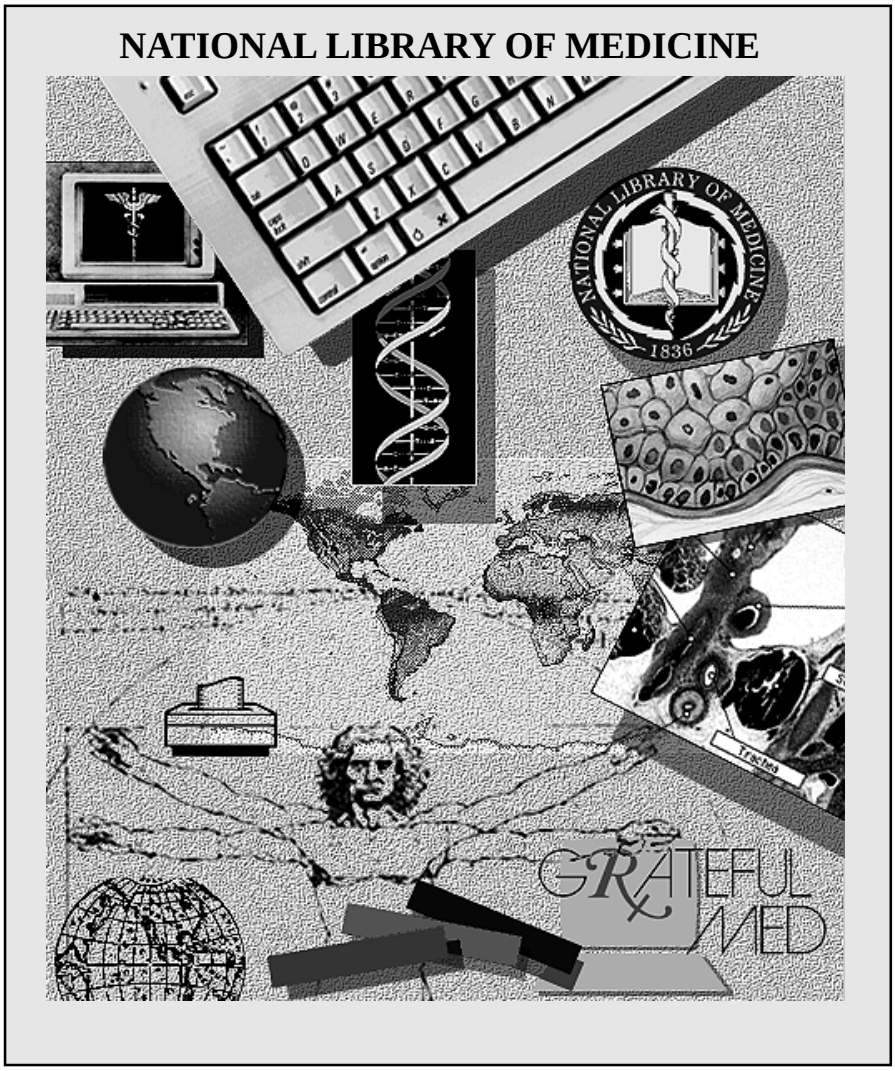
Address:

Daytime Phone:

☐ Check here if you purchased Grateful Med. The new address information will be forwarded to NTIS.

☐ Check here if you participate in the NLM Automatic SDI program and this address change should be applied to your SDI's.

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